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MICHAEL RODAK, JR.

IN THE

# SUPREME COURT OF THE UNITED STATES

OCTOBER TERM 1973

No. 73-1008

**PORTLAND CEMENT CORPORATION**
**An Illinois Not-For-Profit Corporation**

*Petitioner*

v.

**ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY**

*Respondent*

**MEDUSA CORPORATION**
**NORTHWESTERN STATES PORTLAND CEMENT CO.**

*Intervenors*

## PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

ROBERT E. HAYTHORNE
130 East Randolph Drive
Chicago, Illinois 60601

EDWARD W. WARREN
1776 K. Street N.W.
Washington, D.C. 20006

*Counsel for Petitioner*

*Of Counsel:*

KIRKLAND & ELLIS
130 East Randolph Drive
Chicago, Illinois 60601

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## PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

Petitioner, Portland Cement Association, prays that a Writ of Certiorari issue to review the decision and order of the United States Court of Appeals for the District of Columbia Circuit entered in this case on June 29, 1973.

### Opinion Below

The opinion of the Court of Appeals for the District of Columbia Circuit, not yet reported, appears in the Appendix

hereto. The petition below was filed initially, as provided in the statute, with the Court of Appeals. Thus, there was no trial court action or decision.

## Jurisdiction

The decision and order of the Court below was entered on June 29, 1973. A timely petition for rehearing *en banc* was denied on October 1, 1973 (A. 53a), and this petition for certiorari was filed within 90 days of that date. The Court's jurisdiction is invoked under 28 U.S.C. § 1254(1).

## Questions Presented

1. May the Environmental Protection Agency (EPA) validly issue environmental regulations without adequate consideration of their effect on long-term national productivity despite the requirement for such consideration stated in the National Environmental Policy Act (42 U.S.C. § 4332)?

2. May EPA, in issuing environmental regulations, accord *less* weight to non-environmental factors than other Federal agencies must give to environmetal effects?

3. May a reviewing court refuse to set aside final administrative action when the agency record is inadequate to sustain the regulation?

4. May a regulation establishing different standards for different sources of similar pollutants be upheld in the absence of a rational explanation for the difference in treatment?

5. Are Constitutional due process rights violated by imposing a more stringent procedural burden on a petitioner seeking judicial review of an environmental regulation than on a petitioner seeking consideration of the environmental effects of other administrative action?

## Statutes and Regulations

The statutes and federal regulations involved in this case are:

Administrative Procedure Act, 5 U.S.C. § 706.

Clean Air Act, 42 U.S.C. § 1857(b), c-6, h-5(b)(1).

National Environmental Policy Act. 42 U.S.C. §§ 4331, 4332.

Standards of Performance for New Stationary Sources. 40 C.F.R. Part 60, 36 Fed. Reg. 24876.

The pertinent parts of these statutes and regulations are set forth in the Appendix hereto.

## Statement of the Case

This case places in issue the extent to which EPA must consider and explain the effect of its regulations on the environment, the nation's productivity and the constitutional rights of those subject to regulation; and the action which a reviewing court must take if such consideration and explanation are inadequate. Both the National Environmental Policy Act[1] (NEPA) and the Clean Air Act[2] require the effect on the nation's productivity to be considered in connection with major Federal actions affecting the environment. And the Administrative Procedure Act requires that administrative action be set aside if the issuing agency does

[1] NEPA provides: ". . . all agencies of the Federal Government shall— . . . include in every recommendation or report on proposals for . . . major Federal action[s] affecting the quality of the human environment, a detailed statement . . . on . . . the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. . . ." (42 U.S.C. § 4332, A. 62).

[2] The stated purpose of the Clean Air Act is: ". . . to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population;" (42 U.S.C. § 1857(b)(1), A. 57).

not furnish rational explanation sufficient to demonstrate that issuance of its regulation is not arbitrary, unconstitutional or in excess of the appropriate statutory directive.[3]

The decision below disregards these principles.

Standards of Performance for new[4] Portland Cement Plants were promulgated by EPA on December 23, 1971. These provide a maximum level of particulate matter which may be expelled in exhaust gases. Operation at a level exceeding the Standard violates the Clean Air Act and can subject the operator to penalties, including fines and imprisonment.

Initially, Standards were promulgated for five stationary source categories.[5] Promulgation was preceded by informal rule-making proceedings in which the Agency published proposed standards based on data summarized in a background document; comments of concerned parties were received; and final standards were promulgated. The environmental improvement expected to be achieved by the Standards was not evaluated or stated by the Agency during or after these proceedings. With respect to productive capacity, the Agency estimated three new cement plants would be built and three existing plants modified each year and ignored a statement in its source document that capacity lost through plant and equipment shutdowns was not

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[3] 5 U.S.C. § 706(2)(A)(B)(C), A. 56; *Citizens to Preserve Overton Park* v. *Volpe*, 401 U.S. 402 (1971); *Berger, Administrative Arbitrariness: A Synthesis*, 78 Yale L.J. 965, 972 (1969); *Camp* v. *Pitts*, 411 U.S. 138 (1973).

[4] Construction or modification of which commenced or commences after August 17, 1971. (A. 3)

[5] More than 20 additional stationary source categories have been identified and standards have been proposed for 7 of them, but, as of the date of this petition, only the original group of standards has been finally promulgated. 38 Fed. Reg. 15406 (6-11-73); 4 B.N.A. Env. Rptr.—Current Developments, 179-180 (1973); The Cost of Clean Air, p. 1-3 (U.S. G.P.O. 1973)

taken into account and a U.S. Bureau of Mines Report that 10 plants were closed and that 20 additional kilns were permanently retired in 1970.

Three of the initial stationary source categories (cement plants, power plants and large municipal incinerators) are limited in their emissions of particulates. With respect to these emissions, power plants discharged nearly 10 times more particulates than cement plants, and municipal waste disposal accounted for 7 times as much particulate matter as cement plants prior to the Clean Air Act of 1970.[6]

Particulate emissions from all three sources are controlled by the same technology and types of equipment—electrostatic precipitators or fabric filters in a "baghouse". This equipment is commercially available from a number of suppliers. Theoretically 100% of the solids could be removed by these devices if sufficient capacity were provided. However, the cost of removal rises exponentially and, as complete removal is approached, it costs increasingly more to remove increasingly less particulate. Recognizing this principle, the Council on Environmental Quality stated in its 1971 Annual Report that environmental control should be advanced to the extent that "the expected gains are large relative to the costs."[7]

Against this background, EPA is directed by the Clean Air Act to promulgate standards—

> "• • • which reflect[s] the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction) the Administrator determines has been adequately demonstrated."[8]

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[6] The Cost of Clean Air, Table 1-3; p. 5-3.

[7] Environmental Quality, p. 118, (U.S.G.P.O. 1971).

[8] 42 U.S.C. § 1857c-6(a)(1), A. 57.

Accordingly, EPA, conducted tests to measure performance at representative facilities. The promulgated standards, based principally on the test results, were as follows:[9]

.08 Gr/SCF[10] for incinerators. Four incinerators controlled by precipitators showed test results *all* of which were lower than the standards.

.06 Gr/SCF for power plants. *Two* (of seven) tests of power plants controlled by precipitators had produced results below the standard.

.03 Gr/SCF for cement plants. *No* test found valid by the court below showed the standard had been achieved.

Thus, sources of 10 times as much pollution (power plants) are permitted to emit twice as much particulate *per cubic foot of exhaust gas* as cement plants are allowed and the less offending source is subjected to greater restriction[11] at greater relative cost. In short, a greater cost is imposed to secure a smaller environmental benefit.

No explanation for this difference was made when the Standards were promulgated. Subsequently the Agency stated that the difference was attributable to superior fabric filter technology available to cement plants. This comment was made meaningless by the agency's additional statement that cement plants can meet the Standard by utilizing precipitators[12]—the same equipment used to control the other sources.

Following promulgation, Petitioner sought to have the standards reviewed and set aside by the court below.[13]

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[9] 37 Fed. Reg. 5767 (1972).

[10] Grains per standard cubic foot.

[11] The Standards result in approximately 98% control for power plants and 99.9% control for cement plants.

[12] 37 Fed. Reg. 5767 (1972); A. 25, 26.

[13] The petition was filed in accordance with Section 307 of the Clean Air Act (42 U.S.C. § 1857h-5; A. 2) and Sections 702 and 706 of the Administrative Procedure Act (5 U.S.C. §§ 702, 706; A. 56).

The Petition alleged:

Achievability of the Standards had not been "adequately demonstrated" as required by the Clean Air Act because the results of one of the tests on which the Standards were based were erroneous and neither of such tests was conducted continuously for the period required in the Standard.

The Administrator had not taken cost into account as required by the Clean Air Act.

The Administrator had not observed "procedure required by law" because he failed to comply with the National Environmental Policy Act which requires evaluation of environmental benefit and effect on productivity.

The relative opacity requirement of the Standard is not a valid measurement of pollution and is inappropriate to determine compliance with the law.

The Cement Standards violate the Fifth Amendment to the Constitution because they discriminate against cement plant operators.

The Court below:

Remanded the record because it was not adequate for judicial review principally with respect to the tests on which the Standards were based (A. 35);

Did not set the Standards aside (A. 53);

Did not require EPA to evaluate the expected environmental benefit the Standards were expected to achieve (A. 22-23);

Commented that "The Administrator has obviously given some consideration to economic costs" since the administrative record contained a study which estimated the costs of required control equipment and concluded these could be passed on without much effect on competition because demand for cement is "not highly elastic with regard to price" (A. 23); but did not require EPA, on remand, to comment on the effect of the

Standards on the construction of cement manufacturing capacity;

Commented that the argument that EPA must comply with NEPA because EPA is a federal agency and NEPA expressly applies to "all" federal agencies is "more simplistic than simple" (A. 6); that legislative history indicating whether or not Congress intended NEPA to apply to environmental agencies is ambiguous (A. 8-12); that Section 111 of The Clean Air Act requires the "functional equivalent" of NEPA compliance (A. 16); and decided that, "We establish a narrow exemption from NEPA, for EPA determinations under Section 111 of the Clean Air Act." (A. 21);

Directed EPA, on remand, to give further consideration to and an explanation of the relative opacity standard (A. 52); and

Decided that EPA "is not required to present affirmative justifications for different standards, in different industries" and such comparisons "were not contemplated by Congress in this Act." (A. 26)

In its petition for rehearing, Petitioner asserted that:

The Standards should have been set aside since the administrative record was inadequate to support them;

The court erred in creating an EPA exemption from NEPA;

Excusing the agency from giving a rational explanation for imposing different standards on sources using the same control equipment was erroneous;

The decision below, in violation of due process rights, places a heavier procedural burden on a party seeking review of an environmental regulation than on one seeking to invoke environmental considerations in connection with other agency action.

The rehearing petition has been denied. The remand order principally concerns the achievability of the stand-

ards and the relative opacity standard—subjects *not* placed in issue by this petition. The court below has apparently ruled with finality on the issues with which this petition is concerned.

## Reasons for Granting the Writ

No federal question is more important today than the extent to which the courts may permit an agency to ignore social ills which other agencies are attempting to alleviate by issuing regulations which countermand those of the other agencies. In this case the decision below permits the EPA to perform its regulation with virtually no consideration of factors other than the achievement of its own assigned goals, excuses it from presenting a record on which the constitutionality of its regulations can be reviewed, and creates disparate procedural burdens for proponents of other social goals as compared with litigants seeking to invoke environmental considerations.

To reach this result, the court, by judicial legislation, created an exception from the inescapably express terms of the nation's principal environmental policy statute, ignored a basic purpose of the statute under which the agency was acting and refused to follow the policy, established by this Court, that inadequately supported agency action must be set aside.

The urgency of review by this Court is accentuated by the fact that the court below reviews more administrative actions than any other federal appeals court and thus its application of the Administrative Procedure Act, as *interpreted by this Court*, is especially important. Furthermore, the Clean Air Act designates the court below as the *only* court in which direct review of EPA regulations under that Act may be sought. The court below has already directed

EPA to apply principles stated in the decision in this case to its regulation of other industries[14] and it will undoubtedly apply the same approach to other stationary source standards which may be promulgated soon.[15]

## 1. THE FAILURE OF THE COURT BELOW TO DIRECT EPA TO CONSIDER, WEIGH AND EXPLAIN THE EXPECTED ENVIRONMENTAL BENEFIT AND THE EFFECT ON PRODUCTIVITY CONCERNS VITAL QUESTIONS OF FEDERAL LAW WHICH HAVE NOT BEEN, BUT SHOULD BE, SETTLED BY THIS COURT.

The basic statute (NEPA) in which the nation's environmental policy is established requires that:

> . . . all agencies of the Federal Government shall— . . . include in every recommendation or report on proposals for . . . major Federal action[s] affecting the quality of the human environment, a detailed statement . . . on . . . the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. . . . (42 U.S.C. § 4332; A. 62).[16]

Reiterating this policy, Congress stated in the Clean Air Act that one of its principal purposes is the promotion of "the productive capacity of [the nation's] population."[17]

These statutory provisions were totally disregarded by the court below. Its decision makes no reference to either provision[18] or to any agency or court consideration of the

[14] See *Essex Chemical Corp.* v. *Admin.*, No. 72-1072 and *Appalachian Power Co. et al.* v. *E.P.A.*, No. 72-1079 (D.C. Cir. 9-10-73).

[15] See note 5 *supra.*

[16] 42 U.S.C. § 4332(c)(iv), A. 62.

[17] 42 U.S.C. § 1857(b)(1), A. 57.

[18] Although the court held that Section 111 of the Clean Air Act requires the functional equivalent of NEPA compliance, it does not mention the NEPA requirement that productivity be considered.

impact of the Standards on productivity. The word "productivity" does not appear, even once, in the 53 pages of, or the 103 footnotes to the opinion.

This judicial treatment encourages agency action which can be harmful to the total public interest. A congressional committee recently stated:

> The hearing record this year shows strong evidence that actions by the Environmental Protection Agency in carrying out these laws have contributed to the energy crisis, have increased the damage from floods because of the delay of flood and soil conservation projects, have increased the cost of production of food thereby contributing to higher consumer prices, and have greatly increased the danger to human health by banning DDT, which according to testimony has never injured a human being. In addition, actions by the Agency have placed American industry and American agriculture at a competitive disadvantage both at home and abroad.
>
> • • •
>
> The energy crisis has major implications with regard to our country's national security, foreign policy and balance of trade. These implications were not considered by the Agency in setting the standards and approving the plans that led to the problem. The potential impact on the economic and social well-being of this Nation of actions by the Agency is so great that it is absolutely essential that the Agency be required to consider the impact of their actions.[19]

The failure of EPA to consider the full impact of its actions is the result of its rejection or overly narrow interpretation of the express provisions of statutes (NEPA and the Clean Air Act) under which Congress directed it to act. Where, as here, such agency conduct is condoned and

[19] H. R. Rep. No. 93-275, 93d Cong. 1st Sess., p. 54 (1973).

encouraged by the courts, a major federal problem arises which should be settled by this Court.

In a recent major federal action, the Cost of Living Council exempted the cement industry from price control in order to improve its financial condition, attract capital, increase its productive capacity, and prevent or minimize the adverse economic effects of a cement shortage. Considering the Nation's capacity to produce cement, the Council said:

> Cement is a basic material, fundamental to construction activities and is an essential element to assuring the continued expansion of the U.S. economy. The Council is taking this action to maintain current supplies of cement and encourage the cement industry to invest in both additional new capacity and replacement of older, energy inefficient plants. . . .[20]

The expected economic benefit of this action can be minimized or cancelled by diverting expenditures for increasing production to the purchase and operation of facilities required to comply with excessively strict environmental regulations. EPA should consider this effect in setting the levels of its controls. But the decision below excuses the Agency from considering these matters. (A. 23)

Obviously, some environmental benefit must be secured and some depressive influence on productivity must be incurred. Maximizing the benefit and minimizing the socio-economic cost must be accomplished in the agency proceedings. The only rational process by which this can be done is to balance the expected environmental gains against the anticipated productivity losses.[21]

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[20] 38 Fed. Reg. 32914 (1973).

[21] On this subject the House Committee said:

> "Testimony before the Committee this year indicated that in order to meet the pollution problems and the standards

The balancing process cannot be performed unless a weight or valuation is assigned to the factors on both sides of the balancing scale. This balancing process, however, is aborted at the outset by the decision below which would permit EPA to issue its regulation without assigning a value to the expected environmental gain. (A. 22, 23) In reaching this conclusion the court again rejected the explicit terms of the Clean Air Act, section 309(a) of which requires EPA to comment in writing on the environmental impact of the regulations of "any * * * agency of the Federal Government." (A. 14, 60)

The court's comment that such an evaluation is difficult if not impossible (A. 22) is a true enigma.[22] In another case, the court itself suggested the possibility that recycle sulphuric acid plants might be permitted to operate without control since they account for only .4% of national sulphur dioxide emissions. *Essex Chemical Co. et al.* v. *Administrator*, No. 72-1072 (D.C. Cir. 3-10-73), slip op. at 22.

The decision below permits EPA to avoid an evaluation of both environmental benefit and socio-economic cost of its regulation. Without such evaluation the balancing process cannot be performed and the agency's action cannot be other than arbitrary. This presents an additional vital question of federal law which should be decided by this Court.

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associated with air pollution, water pollution and solid waste disposal over the next decade the country will have to spend about $287 billion. By setting standards that are perhaps too high, we have forced massive expenditures that may result in only modest improvements. . . ." H.R. Rep. No. 93-275, *supra*, at 53.

[22] Paradoxically, EPA is charged with the operation of the national pollution monitoring network (Reorg. Plan No. 3 of 1970, 42 U.S.C. § 4321 note 1970) and has actually assessed national atmospheric quality in its 1973 report to Congress. *The Cost of Clean Air*, Table 1-3, note 6, *supra*.

## 2. THE FAILURE OF THE COURT BELOW TO SET THE STANDARDS ASIDE IS IN DIRECT CONFLICT WITH A RECENT DECISION OF THIS COURT AND MANY DECISIONS OF OTHER APPEALS COURTS AS TO THE PROPER INTERPRETATION OF SECTION 706 OF THE ADMINISTRATIVE PROCEDURE ACT. (5 U.S.C. § 706)

Under Section 702 of the Administrative Procedure Act a person aggrieved by agency action is entitled to judicial review of that action. If, as here, the relevant statute does not require a hearing before the agency, the appropriate standard for review is whether the agency's action was "arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law" as specified in Section 706(2)(A), APA. (5 U.S.C. §§ 702, 706(2)(A); A. 56) These principles were confirmed by this Court in *Overton Park* and further developed in *Camp* v. *Pitts*,[23] where the Court stated:

> ". . . In applying that standard, the focal point for judicial review should be the administrative record already in existence. . . ."
>
> and
>
> ". . . in the present case there was contemporaneous explanation of the agency decision. The explanation may have been curt, but it surely indicated the determinative reason for the final action taken. . . . The validity of the Comptroller's action must, therefore, stand or fall on the propriety of that finding, judged, or course, by the appropriate standard of review. *If that finding is not sustainable on the administrative record made, then the Comptroller's decision must be vacated* and the matter remanded to him for further consideration." 411 U.S. at 143 (emphasis supplied).

In so ruling, this Court reaffirmed the principle which has been followed by the federal courts in virtually every cir-

[23] Note 3, *supra*.

cuit, as set forth in such decisions as *Scenic Hudson Preservation Conf.* v. *F.P.C.*, 354 F.2d 608, 612 (2d Cir. 1965), *Chrysler Corp.* v. *D.O.T.*, 472 F.2d 659 (6th Cir. 1972), and *H & H Tire Co.* v. *D.O.T.*, 471 F.2d 350 (7th Cir. 1972).

This Court's *Camp* decision was published after oral argument in the court below. However, that decision and the above cited appeals courts decisions and others were set forth in the Petition for Rehearing which the court below denied.

In this case the administrative record was not adequate to support the agency action. This inadequacy required the remand. The failure of the decision below to set aside the inadequately supported Standards therefore directly conflicted with the *Camp* decision of this Court and decisions of courts of appeal in other circuits.

The wisdom of the *Camp* decision is graphically demonstrated in this case. Here an invalid standard has been in effect, with the force of law, for two years—and it will have remained in effect for perhaps three years by the time this case is decided. During that time the Standard has deterred construction and modification of productive capacity, the effect of which will be felt for the next several years when plants which might have been built or modified during this period would have been expected to commence operation.

In several environmental cases the court below has found the agency record inadequate but has failed to vacate the agency action. In two opinions the court's comments indicate it regards itself as a participant involved in a continuing administrative process rather than as a judicial body which should review a completed process and either affirm valid action or set aside arbitrary action.

In *Kennecott Copper Co.* v. *E.P.A.*, 462 F.2d 846 (D.C. Cir. 1972) the court referred to itself as being in "partnership" with the agency, and remanded but did not set aside inadequately supported agency action. On remand the agency promptly changed the premises which it had originally alleged were correct, but did not change its regulation.[24] In the instant case, the court again refers to itself as being "in a kind of partnership relationship" with the agency. (A. 35) It obviously will not, on remand, cure the defects in its record because the court below has excused it from doing so.

It has required many decisions to establish the administrative law principle that a reviewing court should not retry the issues in the agency proceeding but should remove itself from the administrative process and affirm or vacate the action based on the administrative record. Agency actions concerning the environment should not be governed by different rules. To assure this result, the conflict between the decision below, this Court's *Camp* decisions, and the decisions of other courts of appeal should be resolved promptly.

### 3. IN RULING THAT E.P.A. NEED NOT EXPLAIN DIFFERENCES IN LEVELS OF POLLUTION CONTROL REQUIRED OF DIFFERENT INDUSTRIAL SOURCES, THE COURT BELOW DECIDED AN IMPORTANT QUESTION OF FEDERAL LAW IN CONFLICT WITH APPLICABLE DECISIONS OF THIS COURT AND THE UNITED STATES CONSTITUTION.

This Court has established the principle that classification in federal statutes which is not rationally related to the statutory purpose violates the due process clause of the Fifth Amendment. *Richardson* v. *Belcher*, 404 U.S. 78, 81, 84 (1971) This principle is based on many earlier decisions

[24] 37 Fed. Reg. 5767 (1972).

of this court, including *Royster Guano Co.* v. *Virginia*, 253 U.S. 412, 417 (1920),[25] where Justice Brandeis (dissenting, with Justice Holmes concurring) pointed out that the similar protection of the Fourteenth Amendment "forbids merely inequality which is the result of clearly arbitrary action." Arbitrariness does not exist if there is a rational basis for the difference.

In order to give effect to this principle administrative agencies must state a rational basis for differences between classifications in their regulations. If they do not do so a reviewing court will have inadequate information to judge whether or not the agency action was arbitrary. The court below denies itself this information. Its decision states:

> The core of our response to petitioners is that the Administrator is not required to present affirmative justifications for different standards in different industries. Inter-industry comparisons of this kind are not generally required, or even productive; and they were not contemplated by Congress in this Act. The essential question is whether the mandated standards can be met by a particular industry for which they are set, and this can typically be decided onthe basis of information concerning that industry alone. (A. 26)

Reduction of *pollution* is the principal purpose of the Clean Air Act. Therefore classification of standards should be rationally related to the reduction of pollution. It is not rational to restrict one source of a pollutant more than another source just because it is a different industry—that reason is not rationally related to the statutory purpose. Nor is it rational to restrict a source of less pollution more stringently than a source of more of the same pollutants, especially where the relative cost of control is greater and both sources use the same control technology and equipment.

[25] See also *Developments in the Law—Equal Protection*, 82 Harv. L. Rev. 1065 (1969).

This subject was raised by comments on the proposed standards and discussed extensively in Petitioner's brief, a copy of which was in agency hands long before the remand proceedings were completed. Thus, the decision below constitutes a final ruling on this issue.

This issue has major current national importance.[26] Almost daily[27] the media report requests for relief from environmental restrictions by various industries which operate stationary sources. These are made in the interest of curbing inflation or conserving energy. Adjustment of E.P.A. stationary source standards could afford such relief. If such action should be considered, any resulting differences between industries should be based on reason and not arbitrariness. The opinion below, however, would effectively exempt E.P.A. actions on this subject from judicial review. Such a result requires consideration by this Court.

**4. THE WIDE DISPARITY IN TREATMENT BETWEEN ENVIRONMENTAL AND OTHER CONSIDERATIONS AND THEIR PROPONENTS ESTABLISHED BY THE COURT BELOW DEPARTS SO FAR FROM THE ACCEPTED AND USUAL COURSE OF JUDICIAL PROCEEDINGS THAT THIS COURT'S POWER OF SUPERVISION IS REQUIRED.**

A petitioner seeking to have EPA explain and justify its standards in terms of the environmental benefit—socio-economic cost criterion is, under decisions of the court below, subjected to procedural and other burdens substantially different from those imposed on a petitioner seeking to require another agency to give weight to environmental

[26] This has been identified as a "moral" as well as a legal issue. *Scientific American*, Vol. 228, No. 6, p. 18 (June 1973).

[27] For example see *Wall Street Journal*, Dec. 7, 1973, p. 24 (Midwest Ed.).

considerations. The decision below, when compared to other decisions by that and other courts illustrates this disparity.

1. A federal agency proposing action to benefit conditions other than the environment is subject to NEPA;[28] the burden of preparing the appropriate impact statement containing the cost-benefit analysis is imposed on the agency[29] on which the further initiative is imposed to give environmental factors at least as much consideration as other factors; and the agency may not limit its consideration to issues raised by other parties but must seek the input of other agencies.[30]

In stark contrast—EPA in promulgating environmental standards is exempted from NEPA and need not prepare an impact statement (A. 21); it is not required to evaluate expected environmental benefit, which is not "a necessary

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[28] *Calvert Cliff's Coord. Comm.* v. *A.E.C.*, 146 U.S. App. D.C. 33, 449 F.2d 1109 (1971); *Nat'l Resources Def. Council Inc.* v. *Morton*, 458 F.2d 827 (1972).

[29] Note especially the Court's comments in *Calvert Cliffs'* that, "It is, moreover, unrealistic to assume that there will always be an intervenor with the information, energy and money required to challenge a staff recommendation. . . ." (449 F.2d at p. 1118).

[30] *Calvert Cliffs', supra; Green Cty. Planning Bd.* v. *F.P.C.*, 445 F.2d 412 (2d Cir. 1972), *cert. denied*, 409 U.S. 849 (1972).

In *Calvert Cliffs'* the Court said:

> "Of course, all of these Section 102 duties are qualified by the phrase "to the fullest extent possible." We must stress as forcefully as possible that this language does not provide an escape hatch for footdragging agencies; it does not make NEPA's procedural requirements somehow "discretionary." Congress did not intend the Act to be such a paper tiger. Indeed, the requirement of environmental consideration "to the fullest extent possible" sets a high standard for the agencies, a standard which must be rigorously enforced by the reviewing courts." at p. 1114.

condition of action" (A. 23); and a superficial consideration of economic cost (without mention of long-range productivity effect) is adequate. (A. 23)[31]

2. An environmentalist attacking a non-environmental regulation need not have participated in the agency proceedings in order to advance his cause in court. *Citizens' Comm. for Hudson Valley* v. *Volpe,* 425 F.2d 97, 101-102 (2d Cir. 1970) As stated by this Court in *Sierra Club* v. *Morton,* 405 U.S. 727 (1972):

> "... once review is properly invoked, that person may argue the public interest in support of his claim that the agency has failed to comply with its statutory mandate." a p. 737.

In this case, however, the court ruled that unless the petitioner challenging an environmental standard participates in the agency proceedings and raises an issue there, the issue will not be considered upon judicial review.[32] (A. 36, 37)

3. A petitioner concerned with pollution may seek reduction of a standard thought to be too generous. The court below stated:

> Of course, the standard for another industry can be attacked, as *too generous,* and hence arbitrary or unsupported on the record, by those concerned with excessive pollution by that industry. There is, therefore, an avenue of judicial review and correction if the agency does not proceed in good faith to implement its general approach. (A. 27)

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[31] The Court said, "The Administrator has obviously given some consideration to economic costs." Compare this statement with that quoted in the preceding footnote!

[32] The Court said, "Ordinarily we would not consider comments not presented to EPA." (A. 37).

In contrast—a petitioner concerned with a standard thought to be *too strict* in relation to a comparable source may, as here, submit comments in the administrative process, argue the point in its brief, but will be unable to secure consideration of this contention because the agency is excused by the decision below from making a response necessary to support judicial review. (A. 26)

4. Final actions of non-environmental agencies will be set aside if not supported by an adequate administrative record. *Camp* v. *Pitts, supra.* (See also discussion on p. 14, *supra,* and decision of the Court below in *National Resources Def. Council, supra.*) In *Calvert Cliffs'*[33] the court below said, "But if the decision was reached procedurally without individualized consideration and balancing of *environmental* factors—conducted fully and in good faith—it is the responsibility of the courts to reverse." (emphasis supplied)

Environmental regulations, however, are *not* set aside even though the administrative record is found to be inadequate. *Kennecott Copper Co.* v. *E.P.A.,* 462 F.2d 846 (D.C. Cir. 1972); *International Harvester Co. et al.* v. *Administrator,* 478 F.2d 615 (D.C. Cir. 1973); *Essex Chemical Co. et al. and Appalachian Power Co. et al.* v. *E.P.A.,* Cases No. 72-1072, 1079 (D.C. Cir. 1973).

The disparities noted above indicate serious procedural due process violations. Unless changed by this Court as soon as possible they will continue to confuse an increasing volume of judicial review litigation and will create avoidable burdens on judicial dockets.

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[33] 449 F.2d at p. 1115.

## CONCLUSION

For the reasons stated above, a Writ of Certiorari should issue to review the opinion of the District of Columbia Circuit.

Respectfully submitted,

ROBERT E. HAYTHORNE
130 East Randolph Drive
Chicago, Illinois 60601

EDWARD W. WARREN
1776 K. Street N.W.
Washington, D.C. 20006

*Of Counsel:*

KIRKLAND & ELLIS
130 East Randolph Drive
Chicago, Illinois 60601

December 27, 1973

Notice: This opinion is subject to formal revision before publication in the Federal Reporter or U.S.App.D.C. Reports. Users are requested to notify the Clerk of any formal errors in order that corrections may be made before the bound volumes go to press.

# United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

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No. 72-1073

PORTLAND CEMENT ASSOCIATION, AN ILLINOIS NOT-FOR-PROFIT CORPORATION, PETITIONER

v.

WILLIAM D. RUCKELSHAUS, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, RESPONDENT

MEDUSA PORTLAND CEMENT CO.

NORTHWESTERN STATES PORTLAND CEMENT CO., INTERVENORS

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Petition for Review of an Order of the Administrator, Environmental Protection Agency

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Decided June 29, 1973

*Robert E. Haythorne,* with whom *Perry S. Patterson* was on the brief for petitioner.

*James R. Walpole,* Attorney, Department of Justice with whom *Kent Frizzell,* Assistant Attorney General, *Edmund B. Clark* and *Martin Green,* Attorneys, Department of Jus-

tice, were on the brief, for respondent. *Raymond N. Zagone,* Attorney, Department of Justice also entered an appearance for respondent.

*Robert H. Shepard* was on the brief for intervenor, Northwestern States Portland Cement Company.

*William H. Wallace* was on the brief for intervenor, Medusa Corporation.

*Turner T. Smith, Jr.,* filed a brief on behalf of Long Island Lighting Company and National Asphalt Pavement Association, as *amici curiae* urging reversal.

*Perry S. Patterson* entered an appearance for intervenors.

Before FAHY, *Senior Circuit Judge,* LEVENTHAL and ROBB, *Circuit Judges.*

Opinion for the Court filed by *Circuit Judge* LEVENTHAL.

LEVENTHAL, *Circuit Judge*: Portland Cement Association seeks review[1] of the action of the Administrator of the Environmental Protection Agency (EPA) in promulgating stationary source standards for new or modified portland cement plants, pursuant to the provisions of Section 111 of the Clean Air Act.[2] Medusa Corporation and Northwestern States Portland Cement Company were granted leave to intervene by this court and they together with petitioner, will be referred to as the cement manufacturers. Long Island Lighting Company has filed a brief as an Amicus Curiae.

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[1] Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 1857h-5(b)(1), requires that a petition for review of the action of the Administrator in setting standards of performance under section 111 of the Act "be filed only in the United States Court of Appeals for the District of Columbia."

[2] 42 U.S.C. § 1857c-6.

## I. Statement of The Case

Section 111 of the Clean Air Act directs the Administrator to promulgate "standards of performance" governing emissions of air pollutants by new stationary sources constructed or modified after the effective date of pertinent regulations.[3] The focus of dispute in this case concerns EPA compliance with the statutory language of Section 111(a) which defines "standard of performance" as follows:[4]

> (1) The term "standard of performance" means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction) the Administrator determines has been adequately demonstrated.

After designating portland cement plants as a stationary source of air pollution which may "contribute significantly to air pollution which causes or contributes to the endangerment of public health and welfare", under Section 111 (b)(1)(A) of the Act,[5] the Administrator published a pro-

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[3] The term "new source" is defined as:

> any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source. 42 U.S.C. § 1857c-6(a)(2).

Modification is, in turn, defined as:

> any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source, or which results in the emission of any air pollutant not previously emitted. 42 U.S.C. § 1857c-6(a)(4).

[4] 42 U.S.C. § 1857c-6(a)(1).

[5] 42 U.S.C. § 1857c-6(b)(1)(A). The designation of portland cement plant emissions was made on March 31, 1971, 36 Fed. Reg. 5931 (1971).

posed regulation establishing standards of performance for portland cement plants. The proposed regulation was accompanied by a document entitled "Background Information For Proposed New-Source Performance Standards," which set forth the justification.[6] Interested parties were afforded an opportunity to participate in the rule making by submitting comments, and more than 200 interested parties did so.[7] The "standards of performance" were adopted by a regulation, issued December 16, 1971, which requires, inter alia, that particulate matter emitted from portland cement plants shall not be:[8]

> (1) In excess of 0.30 lb. per ton of feed to the kiln (0.15 Kg. per metric ton), maximum 2-hour average.
>
> (2) Greater than 10% opacity, except that where the presence of uncombined water is the only reason for failure to meet the requirements for this subparagraph, such failure shall not be a violation of this section.

The standards were justified by the EPA as follows:[9]

> The standards of performance are based on stationary source testing conducted by the Environmental Protection Agency and/or contractors and on data derived from various other sources, including the available technical literature. In the comments on the proposed standards, many questions were raised as to costs and demonstrated capability of control systems

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[6] The proposed standards were issued on August 3, 1971 and published on August 17, 1971, 36 Fed. Reg. 15,704 (1971). The Background Document, prepared by the Environmental Protection Agency, Office of Air Programs, states: "The proposed standards . . . are being distributed concurrently with this document." (JA at 20).

[7] 34 comments, specifically addressed to the Portland Cement standards, are at Tab VIII of the Certified Record (C.R.). They have been filed as a supplement to the Joint Appendix.

[8] 36 Fed. Reg. 24,876 (1971).

[9] Id. at ¶ 17.

> to meet the standards. These comments have been evaluated and investigated, and it is the Administrator's judgment that emission control systems capable of meeting the standards have been adequately demonstrated and that the standards promulgated herein are achievable at reasonable costs.

On March 21, 1972, EPA published a "Supplemental Statement in Connection With Final Promulgation",[10] amplifying the justification for its standards and indicating that it had been prompted by the action of this court in Kennecott Copper Corp. v. E.P.A., 149 U.S.App.D.C. 231, 462 F.2d 846 (1972), to offer "a more specific explanation of how [the Administrator] had arrived at the standard." This statement relied principally on EPA tests on existing portland cement plants to demonstrate that the promulgated standards were achievable.

The action of the Administrator has been challenged on the following grounds: (1) The Administrator did not comply with the National Environmental Policy Act of 1969 (NEPA). (2) Economic costs were not adequately taken into account and the standards unfairly discriminate against portland cement plants, in comparison with standards promulgated for power plants and incinerators. (3) The achievability of the standards was not adequately demonstrated.

## II. Compliance With NEPA

Petitioners argue that EPA acted contrary to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-35, in failing to file a "NEPA" statement in conjunction with the promulgation of the stationary standards. They draw particularly on the language of § 102(2)(C) of NEPA which states:[11]

> The Congress authorizes and directs that, to the

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[10] 37 Fed. Reg. 5767 (1972).

[11] 42 U.S.C. § 4332 (2)(C)(1970).

fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

• • • •

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action . . . .

1. Petitioners, in effect, predicate an EPA obligation to file an impact statement on this simple syllogism: (1) All federal agencies must file an impact statement; (2) EPA is a federal agency; (3) EPA must file an impact statement. Anaconda Copper Co. v. Ruckelshaus, 4 ERC 1817, 1828 (D. Col. 1972). If the premises be accepted, the logic is clear. But the argument is more simplistic than simple, for the premises require a more precise determination of legislative intent. In ascertaining congressional intent we begin with the language of a statute,[12] but this is subject to an overriding requirement of looking to all sources including purpose and legislative history, to ascertain discernible legislative purpose.[13] The question is whether EPA is a "federal agency" within the meaning of NEPA —whether, and to what extent, Congress intended it to be

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[12] Caminetti v. United States, 242 U.S. 470, 485 (1917).

[13] "[T]he 'plain meaning' doctrine has always been subservient to a truly discernible legislative purpose however discerned," by equitable construction or recourse to legislative history. Wilderness Society v. Morton, Slip Opinion No. 72-1796, at 22 (Feb. 9, 1973) (en banc), *cert. denied* —— U.S. —— (1973); District of Columbia v. Orleans, 132 U.S. App. D.C. 139, 141, 406 F.2d 957, 959 (1968).

subject to the NEPA mandate concerning preparation of impact statements.

2. A primary purpose of NEPA, and specifically the impact statement requirement, was the design to co-ordinate disparate environmental policies of different federal agencies.[14] At the time NEPA was enacted, on January 1, 1970,[15] EPA was not yet in existence. EPA was created by Reorganization Plan No. 3, submitted to Congress on July 9, 1970,[16] which was designed to bring under one roof the major environmental federal programs which until that time had been scattered throughout different agencies of the government. It is by no means clear, as will appear, that NEPA's impact statement requirement was intended at time of passage of NEPA to be applicable to such environmental agencies as the National Air Pollution Control Administration of the Department of Health, Education and Welfare or the Federal Water Quality Administration of the Department of the Interior. But even assuming it was applicable to them, it does not necessarily follow that NEPA is applicable to EPA, which Congress did not have before it, and which in its own organization accomplished the purpose of coordination of environmental approach. In statutory interpretation, the courts must often, in effect, consider what answer the legislature would have made as to a problem that was neither discussed nor contemplated. Montana Power Co. v. F.P.C., 144 U.S.App. D.C. 263, 445 F.2d 739 (1970) (en banc), *cert. denied*, 400 U.S. 1013 (1971).

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[14] *See* Calvert Cliffs Coordinating Committee v. AEC, 146 U.S. App. D.C. 33, 47, 449 F.2d 1109, 1123 (1971); National Resources Defense Council, Inc. v. Morton, 148 U.S. App. D.C. 5, 13, 458 F.2d 827, 835 (1972).

[15] 83 Stat. 853.

[16] The reorganization plan was effective December 2, 1970, 35 Fed. Reg. 15623 (1970). *See* 42 U.S.C. § 4321 note (1970).

3. The impact statement issue requires us to consider not only NEPA, but also the Clean Air Act and particularly the statutory scheme by which new stationary source standards are promulgated.[17]

Section 111 of the Clean Air Act establishes precise time schedules for the promulgation of new source standards.[18] The Administrator was required to publish, 90 days after December 31, 1970, a list of categories of stationary sources which "contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare." Within 120 days of the inclusion of a category, the Administrator is required to propose standards, and 90 days thereafter the standards are to go into effect. Obviously, a strong argument can be made that the Clean Air Act, and the provisions for unusual expedition in disposing of the complex environmental and other problems faced by the agency, assumed that the agency would not be subject to the additional time required to prepare a "detailed" proposal of an impact statement, circulate the statement to the agencies for comment and assess the comments made.

The time constraint of the Clean Air Act is perhaps not decisive[19] but it is a substantial consideration and, as will

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[17] In order to give full effect to the Clean Air Act, it must be read, at minimum, *in pari materia* with NEPA. *See* U.S. v. Stewart, 311 U.S. 60 (1940). There is doctrine to the effect that in case of conflict between two federal laws, the later enactment is given precedence. U.S. v. Wrightwood Dairy Co., 127 F.2d 907 (7th Cir. 1942).

[18] 42 U.S.C. § 1857c-6(b)(1).

[19] The quality of a draft impact statement might be lessened to conform to the requirements of speedy action. NEPA requires compliance only "to the fullest extent possible", 42 U.S.C. § 4332, and is subject to a construction of reasonableness. National Resources Defense Council v. Morton, 148

be seen, an inter-related aspect of that Act reinforces the conclusion that NEPA is inapplicable to determinations under it.

Long Island Lighting Company argues that the Act could accommodate delay in the time allowed for publication of the list of categories of stationary sources until an impact statement had been duly prepared, in compliance with NEPA, and completed. This is at odds with the express language of the Act which specifies that any source which contributes to the endangerment of public health or welfare shall be placed on that list at the end of 90 days.

4. As we have already indicated, there is a serious question whether NEPA is applicable to environmentally protective regulatory agencies. There is no express exemption in the language of the Act or Committee Reports.[20] However, such an exemption is set forth in a document entitled "Major Changes in S. 1075 as passed by the Senate" introduced into the Congressional Record by Senator Jackson

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U.S. App.D.C. 5, 15, 458 F.2d 827, 837 (1972). The need for timely action is not exclusive with the Environmental Protection Agency. *See* SCRAP v. United States, 346 F. Supp. 189, 199 (D.D.C. 1972) (3-judge court), *probable jurisdiction noted* 409 U.S. 1073 (1973).

A major difficulty with this approach is that it tends to result in a group of second-class impact statements, ascribed to time urgencies. In contrast, the Council on Environmental Quality has established a relatively short comment time in the interest of a uniform procedure that can accommodate even agencies on a tight time table—to avoid "a delay incompatible with the nature of some government programs." THIRD ANNUAL REPORT 237 (1972).

The crunch under the Clean Air Act is that there is no legal latitude available to delay the action, in order to give more than lip service to the comment procedure.

[20] S. REP. No. 296, 91st Cong., 1st Sess. (1969); H. REP. No. 765, 91st Cong., 1st Sess. (1969).

during debate over approval of the Conference Report.[21]

The document, in analyzing Section 102 of NEPA, detailing the procedures and requirements of an impact statement, stated that the provisions were "not designed to result in any change in the manner in which [environmental agencies] carry out their environmental protection authority". It stated immediately thereafter:

> This provision is, however, clearly designed to assure consideration of environmental matters by all agencies in their planning and decision making—especially those agencies who now have little or no legislative authority to take environmental considerations into account.[22]

Senator Muskie commented on this language as coming from his discussions with Senator Jackson, and then stated, in debate:

> It is clear then, and this is the clear understanding of the Senator from Washington [Jackson] and his colleagues, and of those of us who serve on the Public Works Committee, that the agencies having authority in the environmental improvement field will continue to operate under their legislative mandates as previously established, and that those legislative mandates are not changed in any way by section 102-5.[23]

Manifestly, the statements of these two Senators, who were among the most active in securing the passage of NEPA,[24] are entitled to weight in ascertaining legislative intent.

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[21] 115 CONG. REC. 40417 (1969).

[22] *Id.* at 40418.

[23] *Id.* at 40423.

[24] Senator Jackson, floor manager of the debate on the Conference Report, was the sponsor of the original Senate bill on NEPA, S. 1075, chaired the Senate Committee on Interior and Insular Affairs, which considered the bill, and was a member of the Conference Committee. Senator Muskie was the Chairman of the Subcommittee on Air Pollution of the Committee on Public Works.

However, their understanding was not formalized by any statement in the Conference Report or in the section-by-section analysis of the bill as reported by the Conference Committee.[25] Senator Allott, ranking minority member of the Interior Committee and of the Conference Committee, also a supporter of NEPA, stated:[26]

> . . . while the explanatory statements relative to the interpretation of the conference report language, as provided by the chairman, are useful, they have not been reviewed, agreed upon, and signed by the other Senate conferees. Only the conference report itself was signed by all the Senate conferees, and therefore, only it was agreed upon and is binding.

As for the House of Representatives, its action on the Conference Report was equally ambiguous. Representative Dingell submitted the Conference Report to the House on December 22, 1969,[27] two days after the report had been submitted to the Senate by Senator Jackson. As part of his opening remarks, Rep. Dingell introduced into the record the text of answers to certain questions posed to him by Rep. Fallon, the Chairman of the Committee on Public Works. His answer to one of those questions tracked the language of the "Major Changes" document submitted to the Senate, indicating no intended change in requirements for "environmental control" agencies.[28] There is no indication, however, of any debate or acceptance of Rep. Dingell's answer by any other member of the House.

5. We now turn to consideration of the import of subsequent congressional actions.

In the Federal Water Pollution Control Act Amendments of 1972 (FWPCA), Congress provided that NEPA did not

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[25] H.R. REP. No. 765, 91st Cong., 1st Sess. 7 (1969).

[26] 115 CONG. REC. 40422 (1969).

[27] *Id.* at 40922 (1969).

[28] *Id.* at 40925.

control certain actions taken by EPA pursuant to their water pollution control activities.[29] The question arose in debate, and is carried on by the parties to this case, as to whether this was an "exemption"—in which case the assumption would be that prior law generally intended NEPA to be applicable—or an affirmative declaration that NEPA did apply to only a limited number of EPA activities specified in the amendments. Such debate of a later Congress have been described by the Supreme Court as offering a hazardous basis for inferring the intent of the earlier Congress;[30] and this is borne out by our analysis.

Senator Muskie pointed during the 1972 debates to the Muskie-Jackson colloquy as expressing the intent to exempt EPA, and that the present legislation merely imposed some affirmative NEPA obligations, so as to narrow the exemption.[31] Others, such as Senator Nelson, clearly perceived the water pollution control amendments as, in fact, exempt-

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[29] Pub. L. No. 92-500, 86 STAT. 816 (1972). Section 511(c)(1) provides that NEPA is not applicable to EPA, at least as to impact statements, except in two cases: where grants are made for the construction of publicly owned waste treatment works and where the agency issues new source permits.

[30] United States v. Southwestern Cable Co., 392 U.S. 157, 170 (1968).

[31] 118 CONG. REC. 16877-78 (daily ed., Oct. 4, 1972). Senator Muskie also referred to an intervening interpretation of the Council on Environmental Quality that EPA was exempt from NEPA, 36 Fed. Reg. 7724 (1971) § 5(d). This CEQ interpretation as to EPA, reflected its earlier view that the Federal Water Quality Administration and the National Air Pollution Control Board were exempt from NEPA, 35 Fed. Reg. 7391 (1970) § 5(d). The CEQ view was based on its reading of the legislative history of NEPA, which we find highly ambiguous, and cannot therefore assign this administrative determination controlling weight. At least part of the deference assigned to administrative construction of a statute, concerns the passage of time under which the agency view

ing EPA from NEPA.[32] Senator Jackson had doubts by 1972, as to the wisdom of his prior position on a broad exemption for "environmental control" agencies.[33]

6. The matter resolves itself, as to this issue of exemption for environmental agencies, that we have items which are entitled to some weight as indicia of legislative intent, but cannot be taken as decisive.[34] It becomes appropriate,

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has become an accepted interpretation and in which the Congress has not acted to nullify the agency practice. Deference may also be accorded an administrative interpretation to avoid dislocation where agencies have shaped their actions in accordance with the interpretation, and the court concludes that the interpretation is not inconsistent with discernible legislative intention. Here, however, the issue of meaning turns on statutory wording and legislative history, available in extenso to the court, and not affected by any considerations of special technical expertise of CEQ, which might lead to extra deference. *See* Wilderness Society v. Morton, *supra*, Slip Opinion at 40-51, for discussion of deference to be given administrative construction of statutes. We note that CEQ, in its latest Proposed Guidelines for Preparation of Environmental Impact Statements, 38 Fed. Reg. 10856, 10865 (1973), has retracted § 5d and its broad claim that EPA was exempt from all NEPA requirements. We do not reach the question as to the scope of authority of the Council on Environmental Quality to interpret the requirements of the Act.

[32] Senator Buckley viewed section 511(c)(1) as a provision "which grants broad exemptions", 118 CONG. REC. S16884 (daily ed., Oct. 4, 1972). Senator Nelson stated: "While this section [511(c)(1)] does specifically authorize some exemptions from the environmental policy act to avoid conflict with other key environmental aims, the reach of these exemptions would appear to be narrow." *Id.* at 16888.

[33] *Id.* at 16886-88.

[34] *Compare* United States v. Thompson, 147 U.S. App.D.C. 1, 13, 452 F.2d 1338, 1345 (1971), *cert. denied*, 405 U.S. 998 (1972). *Also see* Calvert Cliffs, *supra*, 146 U.S. App.D.C. at 49-50, 449 F.2d at 1125-26.

then,[35] to consider the policies underlying the legislation.[36] Here, again, we encounter competing considerations reflecting the difficulty in resolving the question; but perhaps they point the way toward a resolution.

The policy thrust toward exemption of the environmental agency is discernible from these factors, taken in combination: (1) An exemption from NEPA is supportable on the basis that this best serves the objective of protecting the environment which is the purpose of NEPA. (2) This comes about because NEPA operates, in protection of the environment, by a broadly applicable measure that only provides a first step. The goal of protecting the environment requires more than NEPA provides, i.e. specific assignment of duties to protection agencies, in certain areas identified by Congress as requiring extra protection. (3) The need in those areas for unusually expeditious decision would be thwarted by a NEPA impact statement require-

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[35] We think little guidance to the resolution of this issue is to be obtained from consideration of section 309 of the Clean Air Act, 42 U.S.C. § 1857h-7, which petitioners greatly relied on during oral argument of this case. That section merely requires the Administrator to review and comment in writing on the impact on the environment of projects of another federal agency "which contains any matter related to duties and responsibilities granted [to the Administrator] pursuant to this chapter." The contention that this section implies the Administrator must file a draft impact statement can only be resolved in the framework of the legislative history which we have already reviewed.

[36] *See* United States v. Sisson, 399 U.S. 267, 297-98 (1970), where Justice Harlan stated: "The axiom that courts should endeavor to give statutory language that meaning that nurtures the policies underlying legislation is one that guides us when circumstances not plainly covered by the terms of the statute are subsumed by the underlying policies to which Congress was committed." *Also see* District of Columbia v. Orleans, *supra*, 132 U.S. App.D.C. at 140-41, 406 F.2d at 958-59.

ment.[37] (4) An impact statement requirement presents the danger that opponents of environmental protection would use the issue of compliance with any impact statement requirement as a tactic of litigation and delay.[38]

The policies against a NEPA exemption embrace the endemic question of "Who shall police the police"? As Senator Jackson stated, "It cannot be assumed that EPA will always be the good guy." [39] Concern was also voiced by petitioners in this case that EPA might wear blinders when promulgating standards protecting one resource as to effects on other resources, as is asserted in this case, that air standards may increase water pollution. Finally, it is argued that a NEPA statement's procedures, though burdensome, allow for needed input by other federal agencies and simultaneously open up the decision-making process to scrutiny by the public.[40]

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[37] Senator Muskie stated, during the debate on the applicability of NEPA statements to EPA, pursuant to the FWPCA amendments of 1972, 118 CONG. REC. 16878 (daily ed., Oct. 4, 1972): "If the general procedural or substantive reforms achieved in NEPA . . . were permitted to override, supersede, broaden, or affect in any way the more specific environmental mandate of the FWPCA, the administration of the Act would be seriously impeded and the intent of Congress in passing it frustrated." For problems in complying with both NEPA and the Clean Air Act's requirements for speedy action, *see* note 19 *supra*

[38] *Id.*

[39] *Id.* at 16887. Senator Jackson raised this pointed concern: "Since EPA was formed, they have done an admirable job and they are continuing to do so, at least for the present. However, it cannot be forgotten that EPA is a regulatory agency and in the past in Washington almost all regulatory agencies have eventually come under the control of those that they are charged with regulating," quoting from the September 22, 1972 National Wildlife Federation Conservation Report.

[40] *Id.* (Statement of Senator Jackson). We do not think that

7. Our consideration of the complex questions raised by a broad exemption claim, reinforce our conclusion that these should not be decided in the present case, which may appropriately be determined upon the logic of a narrow exemption from NEPA applicable to determinations under section 111 of the Clean Air Act. What is decisive, ultimately, is the reality that, section 111 of the Clean Air Act, properly construed, requires the functional equivalent of a NEPA impact statement. Thus in this case, as in International Harvester v. Ruckelshaus, Slip Opinion No.

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the post-decision reporting requirements of the Clean Air Act to Congress, pursuant to sections 312(a) and 313 of the Act, 42 U.S.C. § 1857j-1, 2 (1970), offer the same timely and substantive impact on decision making as would comments on possible adverse environmental impact during a rule-making proceeding. Section 312(a) calls for "Comprehensive economic cost studies", and EPA has already issued its first required report, which includes a discussion of portland cement. S. Doc. No. 92-67, Annual Report of the Administrator, The Economics of Clean Air, 92d Cong., 2d Sess. 4-36-43 (1972), which is based largely on a study made for the purpose of arriving at the promulgated standard and introduced into the rule-making record. ELIAS, J. R. AND J. M. DEMENT, THE FINANCIAL IMPACT OF AIR POLLUTION CONTROL UPON THE CEMENT INDUSTRY (1971) (prepared for EPA) (hereinafter FINANCIAL IMPACT). C. R. TabV(f).

Section 313 of the Act requires, inter alia, a report on "the development of air quality criteria and recommended emission control requirements." Two reports have already issued. S. Doc. 92-66, Annual Report of the Administrator of the Environmental Protection Agency, Progress in the Prevention and Control of Air Pollution, 92 Cong., 2d Sess. (1972); S. Doc. 92-11, 92 Cong., 1st Sess. (1971 Annual Report). Both reports are summary in nature, and neither discusses portland cement.

It is, therefore, apparent that Congress receives no required information about the possible adverse environmental impact of proposed standards for new stationary sources.

72-1517 (D.C. Cir., February 10, 1973), at 62 n.130,[41] we refrain from a determination of any broader claim of NEPA exemption.

Enlarging on our conclusion as to a narrower exemption, we note that section 111 of the Clean Air Act requires a

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[41] To date, only a few cases have dealt with the application of NEPA to EPA. In Getty Oil Co. (Eastern Operations) v. Ruckelshaus, 467 F.2d 349 (3rd Cir. 1972), *cert. denied* 409 U.S. 1125 (1973), the issue was raised in the context of an enforcement proceeding by EPA of Delaware's approved implementation plan under § 110 of the Clean Air Act. Petitioners argued that the failure to file an impact statement rendered the compliance order ultra vires. The Third Circuit held that this objection was improperly raised in an enforcement proceeding, thus not reaching the question, though noting that authority for application was "not persuasive", *citing* Kalur v. Resor, 335 F.Supp. 1 (D.D.C. 1971).

In *Kalur*, the court held that the Corps of Engineers was required to issue an impact statement before granting a permit to dump "refuse" into navigable waters, pursuant to its administration of the Rivers and Harbors Act of 1899, 33 U.S.C. § 407 (1971). This decision was partly responsible for the FWPCA Amendments of 1972, giving EPA authority over the issuance of discharge permits, and exempting issuance from NEPA. Pub. L. No. 92-500, 86 Stat. 814 (1972). *See* statement of Senator Hart, 118 CONG. REC. 16890 (daily ed. Oct. 4, 1972). *Kalur* was subsequently dismissed as moot on appeal to this court by order, following the enactment of the new legislation, and is of no precedential value.

The case most directly on point is Anaconda Copper Co. v. Ruckelshaus, 4 E.R.C. 1817 (D. Colo. 1972). That case dealt with the ability of Anaconda's copper smelter, which emitted sulphur oxides, to conform with EPA standards under § 110 of the Clean Air Act. After the Governor of the State of Montana had deleted that portion of the State plan, relating to these emissions—which affected only Anaconda—EPA proposed its own standards. After administrative hearings, Anaconda brought suit in the district court to enjoin promulgation of the rule. The district court held that more than the

"standard of performance" which reflects "the best system of emission reduction", and requires the Administrator to take "into account the cost of achieving such reduction." These criteria require the Administrator to take into account counter-productive environmental effects of a proposed standard, as well as economic costs to the industry. The Act thus requires that the Administrator accompany a proposed standard with a statement of reasons that sets forth the environmental considerations, pro and con which have been taken into account as required by the Act, and

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minimal due process required in rule-making proceedings should have been afforded at the EPA hearing since the regulation, in effect, applied only to Anaconda, that there was insufficient evidence to support the standards, and that EPA should have been required to file an impact statement pursuant to NEPA. Leaving aside the threshold question as to whether the district court properly took jurisdiction of the proposed rule, *see* Environmental Defense Fund et. al. v. Ruckelshaus, Slip Opinion No. 72-1548 (D.C. Cir., filed March 30, 1973), we think the thrust of the district court's concern, which we share, was the seeming refusal of the EPA to take into account possible adverse impact on water quality which might arise from its air standards. This problem was "not studied or considered by the Administrator" according to the findings of fact of the district court. This concern could have been reflected in a requirement that information be developed on this point in conjunction with the hearings on the standard, but instead the court chose to enjoin the rule on the basis of the failure to file an impact statement. We think the examination of support for this holding was myopic, and rested heavily on the logic of the words "all federal agencies" which, as we have indicated *infra*, text at notes 12, 13, is only itself dependent on the non-obvious premise that EPA is a "federal agency" within the meaning of NEPA.

*See also* Appalachian Power Co. v. EPA, 5 ERC 1222 (4th Cir. 1973) and Duquesne Light Co. v. EPA, Slip Opinion No. 72-1542 (3rd Cir., filed April 2, 1973) holding NEPA inapplicable to actions of Administrator in approving state implementation plan under § 110 of the Clean Air Act.

fulfillment of this requirement is reviewable directly by this Court.[42]

Although the rule-making process may not import the complete advantages of the structured determinations of NEPA into the decision-making of EPA, it does, in our view strike a workable balance between some of the advantages and disadvantages of full application of NEPA. Without the problems of a NEPA delay conflicting with the constraints of the Clean Air Act, the ability of other agencies to make submissions to EPA concerning proposed rules, provides a channel for informed decision-making. These comments will be part of the record in the rule-making proceeding that EPA must take into account.[43]

EPA's proposed rule, and reasons therefor, are in-

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[42] One of the major reasons Senator Muskie offered for not generally applying NEPA to EPA water pollution control activity, during the FWPCA amendments debate of 1972, was that the Federal Water Pollution Control Act "specifically identifies factors to be considered by the Administrator". 118 CONG. REC. 16878 (daily ed. Oct. 4, 1972). The standard of the "best system" is comprehensive, and we cannot imagine that Congress intended that "best" could apply to a system which did more damage to water than it prevented to air.

[43] This approach avoids the straitjacket that NEPA would impose on the time requirements mandated by the Clean Air Act. EPA would have 120 days to issue, as part of its reasons, its consideration of possible adverse environmental effects, along with its proposed standard. This need not be the "detailed" statement required by NEPA. We would expect, however, that all documents which supported its conclusion on this question be made available for comment. Standard CEQ guidelines, or those of the Environmental Protection Agency, for circulation of impact statements could be adapted to provide for circulation to other federal agencies of the statement of reasons and supporting documents. Time allowed for comment would be made to depend on the strict time requirements of the section 111 proceeding.

evitably an alert to environmental issues. The EPA's proposed rule and reasons may omit reference to adverse environmental consequences that another agency might discern, but a draft impact statement may likewise be marred by omissions that another agency identifies. To the extent that EPA is aware of significant adverse environmental consequences of its proposal, good faith requires appropriate reference in its reasons for the proposal and its underlying balancing analysis. While there is more flexibility than NEPA's requirement of an impact statement, this court has stated, and EPA has recognized, that an EPA statement of reasons for standards and criteria require a fuller presentation than the minimum rule-making requirement of the Administrative Procedure Act. *Kennecott Copper* v. *EPA, supra.*

Similarly, EPA's proposed rule, and reasons therefor, are an alert to the public and the Congress who will have the opportunity to comment as to possible adverse environmental effects of the proposed rule, during the pendency of the rule making proceeding. And finally, the courts will be able to scrutinize the analysis of environmental considerations, in assuring that a reasoned decision has been reached.[44]

The court's review guards against arbitrary disregard of environmental factors by EPA without significantly increasing the administrative burden on the agency. And since all environmental questions will have to be considered within the same review proceeding as other challenges to the validity of standards, the potential for incremental litigation delay is minimized.

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[44] The combination of reasons relating to possible adverse environmental impact with those justifying the standards generally, directs the attention of the reviewing court to the "reasoned basis" which supports the rule as a whole, rather than permiting challenges based on particular *per se* violations of NEPA.

As to the standard here at issue, petitioners raise possible adverse environmental impact questions in their briefs.[45] But they have not indicated that these problems were brought to the attention of the agency. Since we are remanding the case for other reasons subsequently discussed, EPA should respond to these questions on remand.

We add, finally, a word of clarification: we establish a narrow exemption from NEPA, for EPA determinations under section 111 of the Clean Air Act. NEPA must be accorded full vitality as to non-environmental agencies, as established by our outstanding precedents.[46]

III. Economic Costs

The objecting companies contend that the Administrator has not complied with the mandate of § 111 of the Act, which requires him to "[take] into account the cost" of achieving the emission reductions he prescribes, a statutory provision that clearly refers to the possible economic impact of the promulgated standards.[47] The nature of

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[45] Petitioner Portland Cement Association asserts in its Brief at 34:

> Increased electricity needed to operate precipitators with greater collection capacity can create increased air pollution by the source of the electricity. Also, stricter standards will result in the collection of more particulates. These must be disposed of somehow.
>
> The alkaline content of cement must be limited and, since much of the collected particulate is substantially alkaline, it cannot be used in production but must be discarded. This waste is usually combined with water and may cause alkaline pollution through direct discharge or the seepage of percolating waters into streams and rivers. Currently Petitioner is discussing with E.P.A. a study to determine what can be done to reduce or avoid this result.

[46] Calvert Cliffs, *supra*.

[47] An amendment which would have deleted consideration

these cost and economic contentions is such that it is possible, and we find it convenient, to consider them now, before describing the industry's processes, which will be presented below in the consideration of other issues.

The Administrator found in the Background Document that, for a new wet-process plant with a capacity of 2.5 million barrels per year, the total investment for all installed air pollution control equipment will represent approximately 12 percent of the investment for the total facility. He also found that "[a]nnual operating costs for the control equipment will be approximately 7 percent of the total plant operating costs if a baghouse is used for the kiln, and 5 percent if an electrostatic precipitator is used." [48]

Petitioners argue that this analysis is not enough—that the Administrator is required to prepare a quantified cost-benefit analysis, showing the benefit to ambient air conditions as measured against the cost of the pollution devices. However desirable in the abstract, such a requirement would conflict with the specific time constraints imposed on the Administrator. The difficulty, if not impossibility, of quantifying the benefit to ambient air conditions,[49] further militates against the imposition of such an imperative on

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of economic impact was proposed by Congressman Ryan of New York, who stated:

> I believe that the threat to our environment is so great that, as a matter of public policy, industry should be required to use the most advanced technology regardless of whether or not a particular industry finds it economically feasible.

This amendment was rejected on voice vote. 116 CONG. REC. 19242-43 (1970).

[48] JA at 50.

[49] *See* Note, *Cost-Benefit Analysis and the National Environmental Policy Act of 1969*, 24 STANF. L. REV. 1092, 1098ff (1972), and authorities cited therein.

the agency. Such studies should be considered by the Administrator, if adduced in comments, but we do not inject them as a necessary condition of action.

The EPA contention that economic costs to the industry have been taken into account, derives substantial support from a study prepared for EPA, which was made part of the rule-making record and referred to in the Background Document, entitled "The Financial Impact of Air Pollution Control Upon the Cement Industry".[50] It concluded that the additional costs of control equipment could be passed on without substantially affecting competition with construction substitutes such as steel, asphalt and aluminum, because "[d]emand for cement, derived for the most part from demand for public and private construction, is not highly elastic with regard to price and would not be very sensitive to small price changes." The study did note that individual mills may be closed in the years ahead, but observed that these plants were obsolete both from a cost and pollution point of view. Petitioners have not challenged these findings here. The Administrator has obviously given some consideration to economic costs.

2. Two questions related to economic considerations remain: (1) the possible effect of the standards on the future building of wet-process plants generally, and the use of electrostatic precipitators as a control device; and (2) possible unfair discrimination between standards set for cement plants, and those set for power plants and incinerators.

As appears from our examination of technological feasibility, in Part IV of this opinion, a substantial question arises as to whether either wet process plants, or any process using electrostatic precipitators, will be able to achieve mandated pollution control. The HEW Atmospheric

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[50] FINANCIAL IMPACT, *supra* note 40, at 42.

Emissions Study, relied on by EPA, reported that as of 1967 there were 110 wet process and 69 dry process plants in the United States, and that they were "expected to increase at a comparable rate." [51] As to exclusion of electrostatic precipitators, the record shows that they are a cheaper technology than fabric filters. Since remand is required for other reasons, as appear from Part IV, we confine our analysis at this juncture to a declaration that on remand the Administrator should consider, as a matter of economic costs, contentions and presentations submitting that the standard as adopted unduly precludes supply of cement, including whether it is unduly preclusive as to certain qualities, areas, or low-cost supplies.

3. Petitioners also challenge the cement standards as unfair in light of lower standards mandated for fossil-fuel-fired steam generating power plants and incinerators.[52] They claim that while the cement standard, as expressed in grains of particulates allowed per standard cubic foot of gas (g/scf), requires a reduction to .03,[53] power plants are permitted to reach .12 and incinerators to be at .10. Also opacity standards differ, with no opacity standard set for

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[51] KREICHELT, T. E., KEMNITZ, D. A., AND CUFFE, S. T., ATMOSPHERIC EMISSIONS FROM THE MANUFACTURE OF PORTLAND CEMENT, U.S. Dept. HEW, PHS, National Center for Air Pollution Control, PHS Publication No. 999-AP-17 (1967) (hereinafter ATMOSPHERIC EMISSIONS), at 6.

[52] These standards were proposed jointly with those of portland cement, 36 Fed. Reg. 15704 (1971), and were adopted at the same time, 36 Fed. Reg. 24876 (1971). The standards for fossil fuel steam generators are challenged in appeal to this court in Appalachian Power Co. v. EPA, Docket No. 72-1079.

[53] The promulgated standards for cement, expressed in particulate levels measured against pounds per ton of feed to the kiln, are convertible, for purposes of comparison, into grains of particulates per standard cubic foot of gas.

incinerators, and with a 20% requirement for power plants (with 40% opacity permitted for not more than 2 minutes in any hour).

First, we identify petitioner's mistake in attaching any weight to a comparison of the proposed standards, whereas the standards as finally adopted permitted pollution standards of only .08 for incinerators and .10 for power plants, compared with .03 for cement plants.

EPA, in response to comments from petitioners on this issue of discrepancy, stated in its supplemental statement in March 1972: "The difference between the particulate standard for cement plants and those for steam generators and incinerators is attributable to the superior technology available therefor (that is, fabric filter technology has not been applied to coal-fired steam generators or incinerators)."[54]

This statement seems to be supported by the Background Document.[55] It suggests that there has indeed been a dif-

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[54] 37 Fed. Reg. 5767 (1972). We also note that EPA disagreed with petitioners as to the relevant numbers to compare. EPA stated that the power plant standard was "0.06 grains per standard cubic foot at normal excess air rates", and that the incinerator standard, while .08 "corrected to 12 percent carbon dioxide", was .05 "[u]ncorrected, at normal conditions of 7.5 percent carbon dioxide."

[55] The August 1971 Background Document was used to support the incinerator and power plant standards, as well as cement standards. The statement is subject to the amplification (JA 29) that fabric filters "are scheduled to be installed" at a power station, though "no full scale fabric filters have been demonstrated on coal fired steam generators." As to munnicipal incinerators, the Document refers to a "small Swiss unit" with a fabric filter tested with European sampling procedures, to lower emission in a "small pilot installation" operated by Pasadena in 1960, and to incinerators (over 50 tons per day) equipped with baghouses that "will be put into service in late 1971 in the United States and Switzerland."

ference in the extent of application of fabric filter technology to cement plants, on the one hand, and power plants and incinerators on the other, although we are not informed by the Administrator as to what characteristics of the concerned industries might account for such differences.

This March 1972 statement of the Administrator was made in response to comments of the cement producers, and was not offered as justification for the cement standards, which were based solely on emission control available to that industry. Petitioners did not identify this part of the March 1972 supplemental statement as troublesome when they sought a remand from this court on other points. However, this is more a matter of atmosphere than dispositive ruling, for if the producers now gave significant indication that they had been dealt with unfairly or invalidly we could doubtless find a procedural path for consideration.

The core of our response to petitioners is that the Administrator is not required to present affirmative justifications for different standards in different industries. Inter-industry comparisons of this kind are not generally required, or even productive; and they were not contemplated by Congress in this Act. The essential question is whether the mandated standards can be met by a particular industry for which they are set, and this can typically be decided on the basis of information concerning that industry alone. This is not to say that evidence collected about the functioning of emission devices in one industry may not have implications for another. Certainly such information may bear on technological capability. But there is no requirement of uniformity of specific standards for

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(JA at 40, 41). If the same technology is now available and in use for incinerators, steam power plants and cement plants, the Administrator on remand may wish to offer some further explanation of the difference in standards set simultaneously for the three industries.

all industries. The Administrator applied the same general approach, of ascertaining for each industry what was feasible in that industry. It would be unmanageable if, in reviewing the cement standards, the court should have to consider whether or not there was a mistake in the incinerator standard, with all the differences in parties, practice, industry procedures, and record for decision. Of course, the standard for another industry can be attacked, as too generous, and hence arbitrary or unsupported on the record, by those concerned with excessive pollution by that industry. There is, therefore, an avenue of judicial review and correction if the agency does not proceed in good faith to implement its general approach. But this is different from the supposition that a claim to the same specific treatment can be advanced by one who is in neither the same nor a competitive industry.

There is, of course, a significant and proper scope for inter-industry comparison in the case of industries producing substitute or alternative products. This bears on the issue of "economic cost". But this comparison was utilized in arriving at the agency decision, and no contention is raised in this court that such competitive-industry impact was either ignored or assessed invalidly.

## IV. Achievability of Emission Standard

Section 111 of the Act requires "the degree of emission limitation achievable [which] . . . the Administrator determines has been adequately demonstrated." Petitioners contend that the promulgated standard for new stationary sources has not been "adequately demonstrated", raising issues as to the interpretation to be given to this requirement, the procedures followed by the agency in arriving at its standard, and the scientific evidence upon which it was formulated. An examination of these questions requires a brief description of the process used to manufac-

ture portland cement and the devices presently employed to control emissions.

A. *Present types of Emission Control in the Manufacture of Portland Cement*

In the manufacturing process for portland cement,[56] the principal ingredients, limestone and clay, are combined, after having been reduced to a powdery fineness, to make a substance known as raw feed. The powdered limestone and clay are mixed by either the wet process or the dry process. In the wet process, water is added to the limestone and clay to make a slurry, which is then introduced into a kiln. In the dry process, the two substances are mixed mechanically and by use of air before the mix is introduced into a kiln.

Raw feed is introduced to the kiln at ambient air temperature and is then heated to a temperature of about 2700° Fahrenheit, produced within the kiln by the use of various fuels. The emission standards under challenge here relate solely to the control of particulate matter produced by the kiln operation.

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[56] The following description of the manufacturing process is based on ATMOSPHERIC EMISSIONS, *supra* note 51, and the Affidavit of Ralph H. Striker, a professional engineer, sworn on June 9, 1972. C.R., Tab IX, at 1. Striker described his background as follows:

> Since 1938 I have been engaged in various process phases of the cement industry; my professional specialty is the chemistry of portland cement manufacture, including process design and related instrumentation control. Within the scope of my specialty is the chemical processes occurring in the manufacture of portland cement and emissions and gas emanating therefrom. Presently I am Vice President of Bendy Engineering Company, St. Louis, Missouri, where I have participated in the design from a basic process standpoint of not less than ten kilns in the last ten years.

The kiln operation involves the chemical process known as calcining limestone; carbon dioxide is driven from the limestone, converting calcium carbonate ($CaCO_3$) into calcium oxide (CaO), ($CaCO_3$ yields $C0_2$ + Ca0). The calcium oxide later combines with the clay to form a substance known as "clinker", the basic component of cement. The calcination process produces gases and dust as by-products. The particulate matter is suspended in the hot exhaust gas and the various types of emission control devices remove this matter from the gas, before it is emitted into the atmosphere through a stack.

The two types of equipment principally used in removing particulate matter from the exhaust gas are electrostatic precipitators and glass fabric bags, impregnated with graphite, located in a "bag house." When the precipitator is used, dust particles are charged and pass through an electrical field of the opposite charge, thus causing the dust to be precipitated out of the exhaust gas and thereafter collected by the device. When glass fabric bags are used, the exhaust gas is cooled, sometimes by a water spray, so that the bags will operate without damage from excessive heat. The bag filters out the particulate dust, though sometimes the coolant combines with the dust to form a gummy substance as residue in the bags, which must be continuously cleaned out in order to avoid impairing the permeability of the bag.

It is the ability of control devices such as precipitators and bags to separate out a sufficient amount of particulate from the exhaust—in accord with the proposed standards —which is under challenge by the manufacturers. The standard requires that the particulate matter emitted from portland cement plants not be "in excess of 0.30 lb. per ton of feed to the kiln . . . maximum 2-hour average".

B. *Technology Available For New Plants*

We begin by rejecting the suggestion of the cement

manufacturers that the Act's requirement that emission limitations be "adequately demonstrated" necessarily implies that any cement plant now in existence be able to meet the proposed standards. Section 111 looks toward what may fairly be projected for the regulated future, rather than the state of the art at present, since it is addressed to standards for new plants—old stationary source pollution being controlled through other regulatory authority.[57] It is the "achievability" of the proposed standard that is in issue.

The language in section 111 was the result of a Conference Committee compromise, and did not incorporate the language of either the House or Senate bills.[58] The House bill would have provided that "the Secretary . . . [give] appropriate consideration to technological and economic feasibility", while the Senate would have required that standards reflect "the greatest degree of emission control which the Secretary determines to be achievable through application of the latest available control technology, processes, operating methods, or other alternatives."

The Senate Report made clear that it did not intend that the technology "must be in actual routine use some-

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[57] Under §§ 109-110, 42 U.S.C. § 1857c-4, 5, of the Clean Air Act the Administrator sets national primary and secondary ambient air standards relating to required air quality for each air pollutant. States must draw up a plan to comply with such standards, which in turn must be approved by EPA. These ambient air standards relate to pollution from any source, whether it be old or new, stationary or moving, but specific new or modified stationary sources are only regulated directly under § 111.

[58] The Conference Committee considered S.4358, 91st Cong., 2d Sess., 113 (1970) and H.R. 17255, 91st Cong., 2d Sess. sec. 112 (1970). The Report of the Conference does not discuss the language finally adopted, H. REP. No. 91-1783, 91st Cong., 2d Sess. 9, 45 (1970).

where."[59] The essential question was rather whether the technology would be available for installation in new plants. The House Report also refers to "available" technology. Its caution that "[i]n order to be considered 'available' the technology may not be one which constitutes a purely theoretical or experimental means of preventing or controlling air pollution"[60] merely reflects the final language adopted, that it must be "adequately demonstrated" that there will be "available technology".

The resultant standard is analogous to the one examined in *International Harvester, supra.* The Administrator may make a projection based on existing technology, though that projection is subject to the restraints of reasonableness and cannot be based on "crystal ball" inquiry. Slip Opinion at 18. As there, the question of availability is partially dependent on "lead time", the time in which the technology will have to be available. Since the standards here put into effect will control new plants immediately, as opposed to one or two years in the future, the latitude of projection is correspondingly narrowed. If actual tests are not relied on, but instead a prediction is made, "its validity as applied to this case rests on the reliability of [the] prediction and the nature of [the] assumptions." *International Harvester* at 45.

C. *Right to Comment on EPA Methodology*

We find a critical defect in the decision-making process in arriving at the standard under review in the initial inability of petitioners to obtain—in timely fashion—the test results and procedures used on existing plants which formed a partial basis for the emission control level adopted, and in the subsequent seeming refusal of the agency to respond to what

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[59] S. REP. No. 9-1196, 91st Cong., 2d Sess. 16 (1970).

[60] H. REP. No. 91-1146, 91st Cong., 2d Sess. 10 (1970).

seem to be legitimate problems with the methodology of these tests.

*1. Unavailability of Test Methodology*

The regulations under review were first proposed on August 3, 1971 and then adopted on December 16, 1971. Both the proposed and adopted rule cited certain portland cement testing as forming a basis for the standards. In the statements accompanying the proposed rule, the Administrator stated:[61]

> The standards of performance set forth herein are based on stationary source testing conducted by the Environmental Protection Agency and/or contractors . . . .

On December 16, this test reliance was reiterated:[62]

> The standards of performance are based on stationary source testing conducted by the Environmental Protection Agency and/or contractors . . . .

As indicated in the earlier statement of the case, the proposed standard was accompanied by a Background Document which disclosed some information about the tests, but did not identify the location or methodology used in the one successful test conducted on a dry-process kiln. Further indication was given to petitioners that the Administrator was relying on the tests referred to in the Background Document, when the statement of reasons accompanying the adopted standard were expanded in mid-March of 1972, in the supplemental statement filed while this case was pending on appeal to our court. The Administrator there stated:[63]

> The proposed standard was based principally on par-

[61] 36 Fed. Reg. 15704 (1971).

[62] 36 Fed. Reg. 24876 (1971).

[63] 37 Fed. Reg. 5767 (1972).

> ticulate levels achieved at a kiln controlled by a fabric filter.

For the first time, however, another set of tests was referred to, as follows:

> After proposal [of the regulation], but prior to promulgation a second kiln controlled by a fabric filter was tested and found to have particulate emissions in excess of the proposed standard. However, based on the revised particulate test method, the second installation showed particulate emissions to be less than 0.3 pound per ton of kiln feed.

These two testing programs were referred to in the March 1972 supplemental statement, but the details, aside from a summary of test results, were not made available to petitioners until mid-April 1972. At that time, it was revealed that the first set of tests was conducted April 29-30, 1971, by a contractor for EPA, at the Dragon Cement Plant, a dry process plant in Northampton, Pennsylvania, and that the second set was performed at the Oregon Portland Cement plant, at Lake Oswego, Oregon, a wet process plant, on October 7 and 8, 1971. The full disclosure of the methodology followed in these tests raised certain problems, in the view of petitioners, on which they had not yet had the opportunity to comment. Their original comments in the period between the proposal and promulgation of the regulation could only respond to the brief summary of the results of the tests that had been disclosed at that time.

After intervenor Northwestern States Portland Cement Company received the detailed test information in mid-April 1972, it submitted the test data, for analysis of reliability and accuracy, to Ralph H. Striker, an engineer experienced in the design of emission control systems[64] for portland cement plants. He concluded that the first series of tests run at the Dragon Cement Company were "grossly

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[64] *See* note 56 *supra*.

erroneous" due to inaccurate sampling techniques to measure particulate matter.[65] Northwestern States then moved this Court to remand the record to EPA so that the agency might consider the additional comments on the tests. This motion was granted on October 31, 1972.[66] This action by the Court was based on "the flexibility and capacity for reexamination that is rooted in the administrative process". *International Harvester*, Slip Op. at 25. We considered this opportunity to make further comments necessary to sound execution of our judicial review function.[67]

We are aware that EPA was required to issue its standards within 90 days of the issuance of the proposed regulation, and that this time might not have sufficed to make an adequate compilation of the data from the initial tests, or to fully describe the methodology employed. This was more likely as to the second tests, which were begun during the pendency of the proposed regulation. In contrast, more than three months intervened between the conduct of the first tests and the issuance of the proposed regulation. Even as to the second tests however, as we indicated in *International Harvester*, which involved the issue of the availability of the Technical Appendix upon which the auto emission suspension decision was based, the fact that the agency chose to perform additional tests and release the results indicates that it did not believe possible agency consideration was frozen. Slip opin. at 26. It is not consonant with

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[65] C.R. Tab IX, Striker Affidavit at 2.

[66] A motion of similar effect was granted as to petitioner-intervenor Medusa Corp. to make additional presentations to the agency, on June 23, 1972.

[67] Written comments were submitted as requested, and as required by the APA § 4(c), 5 U.S.C. § 553(c). Obviously a prerequisite to the ability to make meaningful comment is to know the basis upon which the rule is proposed.

the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, critical degree, is known only to the agency.

*2. The EPA response to the Remand*

In this case, EPA made no written submission as to the additional comments made by petitioners. Our remand was ordered, as to Northwestern, on October 31, 1972. All that EPA did was to comply with the mandate that the analysis of Mr. Striker be added to the certified record. It may be that EPA considers Mr. Striker's analysis invalid—but we have no way of knowing this. As the record stands, all we have is Mr. Striker's repudiation of the test data, without response. The purpose of our prior remand cannot be realized unless we hear EPA's response to his comments, and the record must be remanded again, for that purpose.

We are not establishing any broad principle that EPA must respond to every comment made by manufacturers on the validity of its standards or the methodology and scientific basis for their formulation. In the case of the Striker presentation, however, our prior remand reflects this court's view of the significance, or at least potential significance, of this presentation. If this were a private lawsuit, we might reverse the order under appeal for failure of its proponent to meet the burden of refutation or explanation. Since this is a matter involving the public interest, in which the court and agency are in a kind of partnership relationship for the purpose of effectuating the legislative mandate, we remand. This agency, particularly when its decisions can literally mean survival of persons or property, has a continuing duty to take a "hard look" at the problems involved in its regulatory task, and that includes an obligation to comment on matters identified as potentially significant by the court order remanding

for further presentation. Manufacturers' comments must be significant enough to step over a threshold requirement of materiality before any lack of agency response or consideration becomes of concern. The comment cannot merely state that a particular mistake was made in a sampling operation; it must show why the mistake was of possible significance in the results of the test. This was certainly done by Mr. Striker, who on the basis of some extensive mathematical calculations stated:

> It is my personal opinion that the particulate matter emissions of .202 pounds in test 1 per ton of kiln feed reported in the summary sheet on Page vii and again on Page 6 of Exhibit 4-A is grossly erroneous, and that the correct emission of particulate matter is in the neighborhood of .404 pounds per ton of kiln feed.

In order that rule-making proceedings to determine standards be conducted in orderly fashion, information should generally be disclosed as to the basis of a proposed rule at the time of issuance. If this is not feasible, as in case of statutory time constraints, information that is material to the subject at hand should be disclosed as it becomes available, and comments received, even though subsequent to issuance of the rule—with court authorization, where necessary. This is not a requirement that the rule be suspended, though the court may consider an application for stay based on probability of success and furtherance of the public interest. Virginia Petroleum Jobbers v. F.P.C., 104 U.S.App.D.C. 106, 259 F.2d 921 (1958).

Conversely, challenges to standards must be limited to points made by petitioners in agency proceedings. To entertain comments made for the first time before this court would be destructive of a meaningful administrative process.

There are claims made in this court which were not presented to EPA. For example, petitioner Portland Cement

Association states in its brief,[68] in regard to the first set of tests at the Dragon Cement Plant:

> Mistakes and conditions occurred which prevented the test from using *observed, measured* values. Encrusted solids were thought to cause a high reading in Run 1 so lower readings from other tests were substituted. The area of a duct was calculated rather than measured due to the presence of deposits. And liquid from Run 3 was erroneously poured into a beaker from Run 2.

From the reference supplied in petitioner's brief, we discern that this criticism of testing procedure was based upon data released on the testing after the 45 day period of comment had passed, and so there was no opportunity at that time to bring this sampling error to the attention of the agency. However, our October 1972 remand gave EPA an opportunity, in its updating and ongoing reexamination, to make a specific comment on petitioner's objection to the Dragon plant test. Instead, only the comment of Mr. Striker was presented.

Ordinarily, we would not consider comments not presented to EPA. But here there was belated disclosure by EPA of back-up testing, and remand will be necessary concerning the Striker criticism. Accordingly, we will provide that EPA should, on remand, consider the contentions presented in briefs to this court, though not previously raised, unless EPA explains why they are not material. It will be for EPA, on the remand, to examine the relevancy and import of petitioners' criticisms of the Administrator's methodology.

*3. Analysis of Support for Standards*

A troublesome aspect of this case is the identification of what, in fact, formed the basis for the standards promulgated by EPA—a question that must be probed prior

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[68] Portland Cement Association Brief at 17-18.

to consideration of whether the basis or bases for the standards is reliable. Nominally, there would seem to be three major bases for the rule and its standards: (1) the tests run on the dry-process Dragon Cement Plant, (2) the tests run on the wet-process Oregon Cement Plant, and (3) literature sources. The two tests were discussed by EPA in the supplemental statement issued subsequent to the issuance of the rule. As to literature sources, the Background Document issued with the proposed rule identifies as "a principal literature source" a government study, undertaken under the auspices of HEW in 1967, entitled "Atmospheric Emissions from the Manufacture of Portland Cement".

In the briefs to this Court, EPA counsel disclaim reliance on these three sources, despite statements directly to the contrary accompanying the proposed and promulgated rule, and the supplementary statement of reasons issued on the basis of *Kennecott*.

In regard to the tests, the EPA brief states:[69]

> Since the tests conducted by EPA were used, *along with other items,* to assist in determining what emission levels were being achieved by properly maintained and operated control equipment, and were not used as the *primary* basis for the cement standards, petitioner's criticisms of such tests and testing procedures are irrelevant. (emphasis supplied)

The brief further states that the HEW study "was not relied upon to support the achievability of the cement standards".[70]

Counsel on appeal cannot substitute new reasons for those offered by the agency.[71] Certainly, counsel cannot disclaim

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[69] Brief at 21-22.

[70] *Id.* at 19.

[71] Burlington Truck Lines v. United States, 371 U.S. 156,

reliance on reasons offered by the agency in its statement of reasons, except in the sense that errors may be asserted to fall within the limited "harmless error" doctrine applicable to administrative agencies.

We turn now to the specific technical problems raised by the cement manufacturers.

a. *Dragon Cement Plant tests* [72]

Two kilns were tested by the EPA contractor at the Dragon Cement Plant.[73] A test of a dry-process kiln controlled with a baghouse is used for support of the standard since testing "showed particulate emissions of 0.20 pound per ton of feed, which is below the proposed standard." [74] This particular plant was selected for testing on the basis that it was reportedly one of the 12 best controlled plants in the United States.

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168-9 (1962); International Harvester, *supra*, slip op. at 25; Braniff Airways, Inc. v. CAB, 126 U.S.App.D.C. 399, 411, 379 F.2d 453, 465 (1967).

[72] A description and analysis of these tests is in the Certified Record, Tab V(i). Emission Testing Report, ETB Test Number 71-MM-05. Emissions from Dry Process Cement Kiln at Dragon Cement Company, Northampton, Pennsylvania. Environmental Protection Agency, Office of Air Programs.

[73] The Background Document indicates that two wet process kilns controlled by electrostatic precipitators were unable to meet the proposed standards, and they are not relied upon here. We are not supplied with an identification of the plant(s) where these tests were performed. The Background Document states that four kilns were tested but that "results of only three tests were available at the time the standards were proposed" and also discloses that the missing test was performed upon a dry process kiln. JA at 47-48. We are uncertain whether this fourth kiln was one of the two tested at the Dragon Plant or was located at still another plant.

[74] *Id.* at 48.

The first point raised by petitioner, and included in the comments by cement manufacturers presented to the agency on its proposed standard,[75] was that a single test offered a weak basis for inferring that all new cement plants would be able to meet the proposed standards. As we stated in *International Harvester, supra,* slip opin. at 55, "It would . . . seem incumbent upon the Administrator to estimate the possible degree of error inherent in his prediction." The significance of the lack of any indication of statistical reliability was underscored by T. E. Kreichelt, the author of the HEW study relied upon by the Administrator, in a letter, by way of comment, on the proposed standard.[76] He stated that "the emission limit was based on one (1) test, i.e. the fabric filter test. . . . I do not believe that the emission limits should be selected on only four tests, much less one test."

Mr. Kreichelt raised a second and related point addressed to the reliability of a prediction based on a successful dry-process plant, for a prediction that wet-process plants would be able to also meet the standard. He stated in this regard:[77]

> Another outcome of basing emission limits on insufficient data is that the limit may represent only part of a given industrial classification. For example, is 0.30 lb/ton of feed attainable only for dry-process kilns? Or is it also attainable for wet-process kilns? Probably both, but there is not even one test to substantiate the limit for wet-process kilns. For each variation of each process of each source classification, the number of tests required should be sufficient (say, three

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[75] *See* Comments in C.R. Tab VIII, items 10 (Portland Cement Association), 14 (General Portland Cement Company), 20 (Ideal Basic Industries, Inc.).

[76] Letter of Thomas E. Kreichelt, C.R. Tab VIII, item 27, at 2.

[77] *Id.*

tests within the limit) to result in statistically sound limits.

We are not here considering a regulation that was issued in the contemplation that all new cement plants will be dry-process, and controlled by baghouses on the theory that this is the "best system" of emission control. Possibly such an approach would be feasible, but in any event it would require underlying reasons, by EPA, to terminate the process which the HEW had identified as major now and in future projection.[78]

A second objection is to the techniques used by the EPA to measure emissions from the Dragon plant.

These "sampling" techniques assume particular importance if they deviate from procedures, outlined by regulation, for ascertaining compliance with prescribed standards. Although this difference could be eliminated—as the Administrator attempted to do in *International Harvester* —by rewriting "sampling" techniques, rather than lowering standards, a significant difference between techniques used by the agency in arriving at standards, and requirements presently prescribed for determining compliance with standards, raises serious questions about the validity of the standard.[79]

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[78] *See* ATMOSPHERIC EMISSIONS, *supra* note 51, at 6-7.

[79] "Sampling" techniques were modified by EPA between the date of the proposed rule and the promulgated rule in this case. The EPA stated in adopting the rule here under review, 36 Fed. Reg. 24876 (1971), at ¶ 1:

> Particulate matter performance testing procedures have been revised to eliminate the requirement for impinges in the sampling train. Compliance will be based only on material collected in the dry filter and the probe preceding the filter.

We speak here of inconsistencies between the revised standards and the tests performed on which the standards were based.

The cement manufacturers point, in this regard, to the absence of continuous sampling in the EPA data, since the "longest elapsed time of any sampling episode was 30 minutes",[80] whereas under the regulations promulgated, conformity is to be measured on the basis of maximum 2-hour averages.[81] It is incumbent on the Administrator to explain the discrepancy.

The second point raises the question, on the basis of a handwritten note made by the EPA contractor, as to whether the tested plant was operating at maximum performance during testing. The contractor had noted, "Baghouse is undersize and production is held back due to this."[82] Compliance tests under the regulation require, however, that "All performance tests shall be conducted while the affected facility is operating at or above the maximum production rate. . . ."[83]

Thirdly, petitioner contends that mistakes made in the measurement process prevented the test from using observed, measured values. As previously noted, encrusted solids can collect in the bag, and must be constantly cleaned out if the baghouses are to operate with efficiency. In one of the runs conducted, the presence of solids in a duct leading to the stack were thought to cause a high reading, so lower readings from other test runs were submitted. On another run, the liquid, which was to be the basis for a

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[80] This claim is made on the basis of inspection of the full report of the EPA contractor. *See* C.R. Tab V(i), App. E, at 41.

[81] § 60.62 (a) (1), 36 Fed. Reg. 24876 (1971).

[82] C.R. Tab V(i), App. B, at 22. This notation was made on a form which required, in part, a "description of any unusual features about environment; height; odors; toxic conditions, temperature, dust, etc.

[83] § 60.64 (b), 36 Fed. Reg. 24876 (1971).

measurement of particulate concentration, was erroneously poured into a beaker from a previous run.[84] However, deviations from prescribed measurement techniques are not necessarily significant as to testing results, and if petitioners press this point on remand they must establish that such test deviations bear significant consequences.

Finally, engineer Striker claims significant errors of measurement were made in determining the measurement of the cubic feet of stack gas per minute, and a resulting understatement of the true volume of calcining carbon dioxide included in total stack gas. He states that commonly "35% (plus or minus 1%) of raw feed is converted into carbon dioxide in the burning process."[85] He then notes that an accurate measure of raw feed is the volume of calcining carbon dioxide[86] appearing in stack gas, which in turn depends on an accurate measurement of the volume of stack gas. His own calculations, based on EPA data showing a stack flow rate of 51,187 cubic feet per minute of dry gas, indicate that there were 2153 cubic feet per hour of stack gas in the test attributable to calcining carbon dioxide coming from the raw feed and that "as a matter of basic chemistry" 2153 cubic feet of calcining carbon dioxide "comes only from 22.11 tons of raw feed."[87] This was at variance from the kiln rate of 44.03 tons of raw feed per hour reported in the test. He concludes that the error lay not in the measurement of the raw feed, but in the test data reported on the stack gas volume—flow rate of 51,187—which in his judgment requires more sophisticated equipment for recording than does the raw feed which is

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[84] C.R. Tab V(i), at 7.

[85] C.R. Tab IX, at 3.

[86] The term calcining carbon dioxide is used to distinguish it from the carbon dioxide that is the result of burning fuel in the kiln.

[87] C.R. Tab IX, at 4.

easily measureable. Having corrected the stack gas figure, he states his opinion that the EPA assumption of emissions satisfying its ultimate 0.30 standard was in error.[88] He concluded:

> It is my personal opinion that the particulate matter emissions of .202 pounds in test 1 per ton of kiln feed reported . . . is grossly erroneous and that the correct emission of particulate matter is in the neighborhood of .404 pounds per ton of kiln feed.

We are not competent to decide if Mr. Striker's methodology and conclusions are correct. We can note, however, that he claims that as a matter of "basic chemistry" two test values, for feed and gas volume, cannot co-exist. This is certainly the type of criticism EPA should be required to discuss on remand.

2. *Oregon Portland Cement Plant tests*[89]

The Oregon plant was wet-process controlled by a baghouse. Three tests were made on the kiln operation. The brief of petitioner Portland refers to the test results of the EPA contractor, and points out that these show that in test 1 and 2, particulate emissions were .535 and .361 pounds per ton of kiln feed. Only in the third test was there a result of .291 pounds. Petitioners argue that when only one out of the three tests meet the EPA standards (0.3 percent), the data undercut the validity of the standard. EPA's brief did not address itself to this point, relying instead on its general expertise. If our study of the matter is accurate, it appears that petitioners failed to take into account that the standard, as promulgated, eliminated

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[88] *Id.* at 2.

[89] A description and analysis of these tests is in the Certified Record, Tab V(h), Emission Testing Report, ETB Test Number 71-MM-15. Emissions from Wet Process Kiln at Oregon Portland Cement, Lake Oswego, Oregon. Environmental Protection Agency, Office of Air Programs.

one of the sampling techniques required by the standard as proposed. This undercuts petitioner's contention.[90]

A more serious matter is presented by intervenor Northwestern, which points to the fact that the EPA contractor's report indicates that sampling was not conducted when "process operation was interrupted" and that sampling was only conducted during the periods of "normal operation". The report states:

> Several conditions contributing to these interruptions were: (1) excessive pressure drop across bag house, (2) visible emissions from leaking bags, and (3) breakdown of dust removal equipment. (C.R. Tab V (h) at 9).

The concern of the manufacturers is that "start-up" and "upset" conditions, due to plant or emission device malfunction, is an inescapable aspect of industrial life, and that allowance must be made for such factors in the standards that are promulgated. On August 18, 1972, some eight months after the issuance of the standards under review, and prior to our October, 1972 remand, the EPA proposed a new regulation to take "startup, shutdown and malfunction" problems into effect.[91] The proposed regulation,

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[90] C.R. Tab V(h) at 5. Curiously EPA did not make the point that the test results of .535, .361, .291, showing only 1 out of 3 successful tests, were based on "total catch". This means that the results reflected readings based on probe, filter and impinger sampling techniques. As we observed however, note 79 *supra*, the adopted standard was based only on probe and filter sampling techniques. The Oregon test gave these results for tests conducted on that basis: .247, .309, .261, which shows two successful tests and one almost successful. C.R. Tab V(h), at 4-5.

[91] 37 Fed. Reg. 17214 (August 18, 1972). EPA admitted in its introduction to the proposed regulation that the standards here under review did not take into account this problem. EPA attempted to obviate the implicit criticism by stating in

which as yet has not been adopted, sets up a procedure by which emissions due to malfunction will not be the basis of an enforcement action. It requires reports from manufacturers in cases where emissions exceed standards, recording the "violation" and indicating what measures will be taken to correct or minimize the excess emission levels. The proposed regulation provides:[92]

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its proposal:

> Such occurrences generally are dealt with by the exercise of discretion in the Agency's enforcement activities. The exercise of this discretion would have been accomplished by means of an informal process, in which, before the Agency took enforcement action, sources that had exceeded the standards would have attempted to demonstrate to the Agency that such excess emissions had been unavoidable.

Broadly read, however, this view of enforcement discretion would defer the question of "available" technology to the enforcement stage, an approach not contemplated by section 111. Companies must be on notice as to what will constitute a violation. Moreover, an excessively broad theory of enforcement discretion might endanger securing compliance with promulgated standards.

We do agree, however, with the policy reasons offered by EPA for moving from an informal to a formal system of regulation. EPA's explanation of its regulation stated:

> Three fundamental reasons suggested the correctness of this determination. First, the existence of a formal process better informs the public of the policy and factual issues which will underlie enforcement of the standards. Second, affected industries which are making good faith efforts to meet the standards will on the whole welcome a regularized means of informing the Agency in detail of the circumstances surrounding unavoidable emissions. Third, the Agency expects to benefit substantially from the information it will gain about the operation of the processes in question, for both future enforcement and standard setting.

[92] *Id.*

> (f) Nothing in this section shall relieve a source from compliance with the standards set forth in this part unless the Administrator determines that (1) the occurrence in question did not result from the failure by the owner or operator of the source to operate and maintain properly the affected facility, (2) all reasonable steps were taken to correct, as expeditiously as practicable, the condition causing the emissions to exceed the standards, including the use of off-shift labor and overtime if necessary, and (3) all reasonable steps were taken to minimize the emissions resulting from the occurrence.

The proposed regulation, if adopted, may have consequences which go beyond mere provision for malfunctions. In some sense it imparts a construction of "reasonableness" to the standards as a whole and adopts a more flexible system of regulation than can be had by a system devoid of "give." As we noted in *International Harvester, supra,* a regulatory system which allows flexibility, and a lessening of firm proscriptions in a proper case, can lend strength to the system as a whole. "The limited safety valve permits a more rigorous adherence to an effective regulation." Slip opin. at 44, quoting from WAIT Radio v. FCC, 135 U.S. App.D.C. 317, 323, 418 F.2d 1153, 1159.

If the EPA adopts, or intends to adopt, this proposed regulation, it may take the attendant flexibility into account, on remand, as pertinent to the manufacturers' objections, even though the new regulation has been proposed in a proceeding with a different docket number and caption.

3. *Literature Sources*

The principal source in the scientific literature used by EPA, HEW's "Atmospheric Emissions from the Manufacture of Portland Cement",[93] is called into question by pe-

[93] *See* note 51 *supra.*

titioner on the ground that the test methods used to compile the results of the study were at odds with those used by EPA in its own tests.[94] While counsel for EPA disclaims reliance on the source, the study was cited in the EPA's Statement of Reasons, and EPA should address itself to this contention on remand.

In this connection, a comment on the proper use of scientific literature may be in order. If such literature is relied upon, the agency should indicate which particular findings of that literature are significant. A generalized reference, to a work as a whole, will avail the agency little if a problem arises on judicial review. On remand, any findings in the literature that are relied on by EPA should be specifically indicated. The same procedure is contemplated here as for the test data not submitted to the manufacturers prior to promulgation of the rule, that there be opportunity for comment, and an explanation presenting the EPA position on any challenge.[95]

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[94] As to how results might be skewed by different sampling methods, *see* note 90 *supra*, and Comments of Mr. Kreichelt on the proposed rule, C.R. Tab VIII, item 27, at 2-5.

[95] There is evidence in the record furnished by vendors of emission control devices but not relied upon by the EPA to support its standard that, with proper allowance for malfunction problems, the standards can be met. By way of comment to the proposed rule, Mr. R. E. Frey, Vice President, Mikro Pul Co., stated in a letter of September 20, 1971, C.R. Tab V(e), that: "A properly applied fabric filter (or bag house) will operate with no visible emission. Actual measured outlet loadings are almost always below 0.02 grains per cubic foot and often as low as 0.000 x grains per cubic foot." This would of course be below the required .03 grains per cubic foot standard, the converted measure of .30 lb. per ton of feed to the kiln.

Three letters were inserted into the record following our June 1972 remand of this case, following the motion of in-

*4. Opacity Standard*

Apart from the standard directly regulating particulate concentration, EPA has adopted an opacity standard which provides that there shall be no discharge of particulate matter from the kiln which is:[96]

> Greater than 10 percent opacity, except that where the presence of uncombined water is the only reason for failure to meet the requirements for this subpara-

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tervenor Medusa Corp. Mr. Jack C. Thomas, Sales Manager of Rock Products Industry represented to Medusa that:

> "We can and will guarantee that our Lurgi Electrostatic Precipitator will limit the effluent to less than .30 lbs. per ton of feed to the kiln. However, we cannot guarantee to meet this collection efficiency 100 per cent of the time. During kiln start-up and upset conditions and during possible malfunction, it is conceivable that the effluent would not be in compliance with the E.P.A. Code.

Similar guarantees were offered by Rock Creek for fabric filter bags.

Claims of capability to conform to the EPA standards were also in letters to Medusa—though without mention of guarantees—from Buell, Division of Envirotech Corp., and Kaiser Engineering. C.R. Tab X.

These claims by the vendors could not be responded to by way of comment, since they were themselves produced as comment, and can be considered on remand. We note, however, that if vendor representations were to be a principal source of reliance by the agency, representations peculiarly subject to considerations of self-interest, more might be required than mere comments. *See* American Airlines v. CAB, 123 U.S.App.D.C. 310, 318-319, 359 F.2d 624, 632-33 (1966) (en banc), *cert. denied*, 385 U.S. 843 (1966). *Compare* International Harvester, *supra*, slip op. at 22. *Also see* Kennecott Copper *supra*, 149 U.S.App.D.C. at 235, 462 F.2d at 850: "There are contexts however, contexts of fact, statutory framework and nature of action, in which the minimum requirements of the Administrative Act may not be sufficient."

[96] § 60.62(a)(2), 36 Fed. Reg. 24876 (1971).

graph, such failure shall not be a violation of this section.

Opacity is defined by the regulation as "the degree to which emissions reduce the transmission of light and obscure the view of an object in the background." [97]

It may be, as EPA argues, that the opacity test is an important enforcement tool,[98] and that the results of an opacity test, which is normally performed at some distance from the plant by trained observers, offers a cheaper and faster method of determining compliance than enforcement of the particulate concentration standard.[99] However, it is one thing to use a method of testing to observe possible violations of a standard; it is another to constitute that method as the standard itself. If the opacity test is to be a standard, and if violations can result in enforcement actions without further testing, the standard must be consistent with the statute and congressional intent.

The thrust of the manufacturers' comments to EPA, and repeated here, is that the opacity test is arbitrary—that inspectors will be unable within any reasonable degree of accuracy to determine whether permitted opacity is 10%.

The critical question is how accurate can opacity observations be. On this point we essentially have before us only

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[97] *Id.* at § 60.2(j).

[98] *See* Comment of State of Maryland to the proposed rule: "Such a prohibition is one of the most effective tools available to state and local regulatory authorities." C.R. Tab VIII, item 24.

[99] Although the revised sampling methods of EPA may have lowered the cost of testing for compliance, National Gypsum Co. commented to the agency on the proposed rule that "the cost of running a test by the proposed method on a single baghouse ranges in the neighborhood of $10,000 to $15,000. . . ." Tab VIII, item 6.

the contentions of the parties. The manufacturers do point to a test conducted for the National Center for Air Pollution Control (U.S. Dept. H.E.W.), where six trained smoke inspectors evaluated a white training plume known to have 0% opacity.[100] All six inspectors rated the plume at more than 0% opacity and 3 evaluated it at more than 20%. A plume known to be at 20% opacity was rated higher than 20% by 5 of the 6 inspectors (one rated it lower) and 2 of them rated it at almost 40%. Problems may also be posed for deciding when opacity is due to water content and when it is not.[101]

The difficulty is that this test has the thrust of indicating that opacity measurements are inherently inadequate, and does not seem to be probative of the manufacturer's quite different claim, namely, that it is at the low ranges that opacity tests become less reliable, and too unreliable to be a legal standard.

On the other hand, EPA's brief does nothing more than point to the fact that many states have required that the plumes from stack emissions conform to a specified percentage of opacity. We note, however, that the opacity standard is at least 20% in the states cited, which corresponds to No. 1 on the Ringelman Smoke Chart.[102]

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[100] *See* Optical Properties and Visual Effects of Smoke Stack Plumes, Pub. Health Serv. Pub. 999-AP-30 (1967 National Tech. Info. Serv. PB 174-705), at 28.

[101] *Compare* State v. Fry Roofing Co., 495 P.2d 751, 757-58 (Ore. Ct. App. 1972).

[102] *See* Arizona Rules and Regulations for Air Pollution, 1 BNA State Air Laws Environ. Reptr. (BNA Air) 311:0502 (40% for visible emission); Arkansas Air Pollution Control Code, 1 BNA Air 316:0504 (20% for new equipment used in a manufacturing process); California Health and Safety Code § 24242 (1967) (40% for aircraft discharge). *Also see* Con-

We think the HEW test adduced by petitioners, though not decisive, suffices to require further consideration and explanation by EPA on remand, and a showing on the record that 10% opacity measurements can be made within reasonable accuracy.[103]

## V. The Standard of Judicial Review and Conclusions

We are quite aware that the standards promulgated and here under review are to be applied to *new* stationary sources. It would have been entirely appropriate if the Administrator had justified the standards, not on the basis of tests on existing sources or old test data in the literature, but on extrapolations from this data, on a reasoned basis responsive to comments, and on testimony from experts and vendors made part of the record. This course was not followed here. Instead, the Administrator in his statement of reasons relied on tests on existing plants and the literature, which EPA counsel now discounts without reference to other record support to take its place.

The Administrator's objectives are laudable, but the statute expressly requires, for the standards he promulgates, that technology be achievable. This record reveals a lack of an adequate opportunity of the manufacturers to comment on the proposed standards, due to the absence of disclosure of the detailed findings and procedures of the tests. This was not cured following our previous October 1972 remand to the agency.

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necticut Administrative Regs., 1 BNA Air 331.0513 (20% for visible emissions); Delaware Administrative Regs., 1 BNA Air 336.0861 (20% for visible emissions).

[103] We think Congress anticipated, as in the National Traffic and Motor Vehicle Safety Act of 1966, that the standards be "objective", 15 U.S.C. § 1392(a), Otherwise "a manufacturer has no assurance that his own test results will be duplicated in tests conducted by the Agency." Chrysler Corp. v. Dept. of Transportation, 472 F.2d 659, 675 (6th Cir. 1972).

We have identified a number of matters that require consideration and clarification on remand. While we remain diffident in approaching problems of this technical complexity, *see International Harvester, supra,* Slip. opin. at 56, the necessity to review agency decisions, if it is to be more than a meaningless exercise, requires enough steeping in technical matters to determine whether the agency "has exercised a reasoned discretion". Greater Boston TV v. FCC (I), 143 U.S. App.D.C. 383, 392, 444 F.2d 841, 850, *cert. denied,* 403 U.S. 923 (1971). We cannot substitute our judgment for that of the agency, but it is our duty to consider whether "the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." Citizens To Preserve Overton Park v. Volpe, 401 U.S. 402, 416 (1971). Ultimately, we believe, that the cause of a clean environment is best served by reasoned decision-making. The record is remanded for further proceedings not inconsistent with this opinion.

*So ordered*

# United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 72-1073 September Term, 19 73

Portland Cement Association, and
Illinois Not-For-Profit Corporation,
Petitioner

v.

William D. Ruckelshaus, Administrator,
Environmental Protection Agency,
Respondent

United States Court of Appeals
for the District of Columbia Circuit
FILED OCT 1 1973
HUGH E. KLINE
CLERK

Medusa Portland Cement Co.
Northwestern States Portland Cement Co. Intervenors

Before: Fahy, Senior Circuit Judge; Lewenthal and Robb, Circuit Judges.

ORDER

The Clerk is directed to file petitioner's lodged petition for rehearing and on consideration of the petitions for rehearing of petitioner (Portland Cement Association) and intervenor (Northwestern States Portland Cement Co.) and of respondent's reply in opposition filed with respect thereto, it is

ORDERED by the Court that the aforesaid petitions for rehearing are denied.

Per Curiam

For the Court:

Hugh E. Kline
HUGH E. KLINE
Clerk

## Subpart D—Standards of Performance for Fossil-Fuel Fired Steam Generators

### § 60.40 Applicability and designation of affected facility.

The provisions of this subpart are applicable to each fossil fuel-fired steam generating unit of more than 250 million B.t.u. per hour heat input, which is the affected facility.

### § 60.41 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, and in Subpart A of this part.

(a) "Fossil fuel-fired steam generating unit" means a furnace or boiler used in the process of burning fossil fuel for the primary purpose of producing steam by heat transfer.

(b) "Fossil fuel" means natural gas, petroleum, coal and any form of solid, liquid, or gaseous fuel derived from such materials.

(c) "Particulate matter" means any finely divided liquid or solid material, other than uncombined water, as measured by Method 5.

### § 60.42 Standard for particulate matter.

On and after the date on which the performance test required to be conducted by § 60.8 is initiated no owner or operator subject to the provisions of this part shall discharge or cause the discharge into the atmosphere of particulate matter which is:

(a) In excess of 0.10 lb. per million B.t.u. heat input (0.18 g. per million cal.) maximum 2-hour average.

(b) Greater than 20 percent opacity, except that 40 percent opacity shall be permissible for not more than 2 minutes in any hour.

(c) Where the presence of uncombined water is the only reason for failure to meet the requirements of paragraph (b) of this section such failure shall not be a violation of this section.

* * * *

## Subpart E—Standards of Performance for Incinerators

### § 60.50 Applicability and designation of affected facility.

The provisions of this subpart are applicable to each incinerator of more than 50 tons per day charging rate, which is the affected facility.

### § 60.51 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part.

(a) "Incinerator" means any furnace used in the process of burning solid waste for the primary purpose of reducing the volume of the waste by removing combustible matter.

(b) "Solid waste" means refuse, more than 50 percent of which is municipal type waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustibles, and noncombustible materials such as glass and rock.

(c) "Day" means 24 hours.

(d) "Particulate matter" means any finely divided liquid or solid material, other than uncombined water, as measured by Method 5.

### § 60.52 Standard for particulate matter.

On and after the date on which the performance test required to be conducted by § 60.8 is initiated, no owner or operator subject to the provisions of this part shall discharge or cause the discharge into the atmosphere of particulate matter which is in excess of 0.08 gr./s.c.f. (0.18 g./NM³) corrected to 12 percent $CO_2$, maximum 2-hour average.

### § 60.53 Monitoring of operations.

The owner or operator of any incinerator subject to the provisions of this part shall maintain a file of daily burning rates and hours of operation and any particulate emission measurements. The burning rates and hours of operation shall be summarized monthly. The record(s) and summary shall be retained for at least 2 years following the date of such records and summaries.

### § 60.54 Test methods and procedures.

(a) The provisions of this section are applicable to performance tests for determining emissions of particulate matter from incinerators.

(b) All performance tests shall be conducted while the affected facility is operating at or above the maximum refuse charging rate at which such facility will be operated and the solid waste burned shall be representative of normal operation and under such other relevant conditions as the Administrator shall specify based on representative performance of the affected facility.

(c) Test methods set forth in the ap-

pendix to this part or equivalent methods approved by the Administrator shall be used as follows:

(1) For each repetition, the average concentration of particulate matter shall be determined by using Method 5. Traversing during sampling by Method 5 shall be according to Method 1. The minimum sampling time shall be 2 hours and the minimum sampling volume shall be 60 ft.$^3$ corrected to standard conditions on a dry basis.

(2) Gas analysis shall be performed using the integrated sample technique of Method 3, and moisture content shall be determined by the condenser technique of Method 5. If a wet scrubber is used, the gas analysis sample shall reflect flue gas conditions after the scrubber, allowing for the effect of carbon dioxide absorption.

(d) For each repetition particulate matter emissions, expressed in gr./s.c.f., shall be determined in accordance with paragraph (c)(1) of this section corrected to 12 percent $CO_2$, dry basis.

## Subpart F—Standards of Performance for Portland Cement Plants

### § 60.60 Applicability and designation of affected facility.

The provisions of the subpart are applicable to the following affected facilities in portland cement plants: kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.

### § 60.61 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part.

(a) "Portland cement plant" means any facility manufacturing portland cement by either the wet or dry process.

(b) "Particulate matter" means any finely divided liquid or solid material, other than uncombined water, as measured by Method 5.

### § 60.62 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is initiated no owner or operator subject to the provisions of this part shall discharge or cause the discharge into the atmosphere of particulate matter from the kiln which is:

(1) In excess of 0.30 lb. per ton of feed to the kiln (0.15 Kg. per metric ton), maximum 2-hour average.

(2) Greater than 10 percent opacity, except that where the presence of uncombined water is the only reason for failure to meet the requirements for this subparagraph, such failure shall not be a violation of this section.

(b) On and after the date on which the performance test required to be conducted by § 60.8 is initiated no owner or operator subject to the provisions of this part shall discharge or cause the discharge into the atmosphere of particulate matter from the clinker cooler which is:

(1) In excess of 0.10 lb. per ton of feed to the kiln (0.050 Kg. per metric ton) maximum 2-hour average.

(2) 10 percent opacity or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is initiated no owner or operator subject to the provisions of this part shall discharge or cause the discharge into the atmosphere of particulate matter from any affected facility other than the kiln and clinker cooler which is 10 percent opacity or greater.

## EXCERPTS FROM THE ADMINISTRATIVE PROCEDURE ACT, TITLE 5 UNITED STATES CODE

§ 706. Scope of review.

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error. (Pub. L. 89-554, Sept. 6, 1966, 80 Stat. 393.)

## EXCERPTS FROM THE CLEAN AIR ACT OF 1967
(84 Stat. 1705, et seq.)

§ 1857. Congressional findings; purposes of subchapter.

* * * *

(b) The purposes of this subchapter are—

(1) to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population;

* * * *

§ 1857c-6. Standards of performance for new stationary sources.

(a) Definitions.

For purposes of this section:

(1) The term "standard of performance" means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction) the Administrator determines has been adequately demonstrated.

(2) The term "new source" means any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source.

(3) The term "stationary source" means any building, structure, facility, or installation which emits or may emit any air pollutant.

(4) The term "modification" means any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.

(5) The term "owner or operator" means any person who owns, leases, operates, controls, or supervises a stationary source.

(6) The term "existing source" means any stationary source other than a new source.

(b) Publication and revision by Administrator of list of categories of stationary sources; inclusion of category in list; proposal of regulations by Administrator establishing standards for new sources within category; promulgation and revision of standards; differentiation within categories of new sources; issuance of information on pollution control techniques; applicability to new sources owned or operated by United States.

(1)(A) The Administrator shall, within 90 days after December 31, 1970, publish (and from time to time thereafter shall revise) a list of categories of stationary sources. He shall include a category of sources in such list if he determines it may contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare.

(B) Within 120 days after the inclusion of a category of stationary sources in a list under subparagraph (A), the Administrator shall propose regulations, establishing Federal standards of performance for new sources within such category. The Administrator shall afford interested persons an opportunity for written comment on such proposed regulations. After considering such comments, he shall promulgate, within 90 days after such publication, such

standards with such modifications as he deems appropriate. The Administrator may, from [time] to time, revise such standards following the procedure required by this subsection for promulgation of such standards. Standards of performance or revisions thereof shall become effective upon promulgation.

(2) The Administrator may distinguish among classes, types and sizes within categories of new sources for the purpose of establishing such standards.

(3) The Administrator shall, from time to time, issue information on pollution control techniques for categories of new sources and air pollutants subject to the provisions of this section.

(4) The provisions of this section shall apply to any new source owned or operated by the United States.

• • • •

(e) Prohibited acts.

After the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source. (July 14, 1955, ch. 360, title I, § 111, as added Dec. 31, 1970, Pub. L. 91-604, § 4(a), 84 Stat. 1683.)

* * * *

§ 1857h-5. Administrative proceedings and judicial review.

(b)(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard under section 1857c-7 of this title, any standard of performance under section 1857c-6 of this title, any standard under

section 1857f-1 of this title (other than a standard required to be prescribed under section 1857f-1(b)(1) of this title), any determination under section 1857f-1(b)(5) of this title, any control or prohibition under section 1857f-6c of this title or any standard under section 1857f-9 of this title may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 1857c-5 of this title or section 1857c-6(d) of this title, may be filed only in the United States Court of Appeals for the appropriate circuit. Any such petition shall be filed within 30 days from the date of such promulgation or approval, or after such date if such petition is based solely on grounds arising after such 30th day.

* * *

§ 1857h-7. Policy review

(a) The Administrator shall review and comment in writing on the environmental impact of any matter relating to duties and responsibilities granted pursuant to this chapter or other provisions of the authority of the Administrator, contained in any (1) legislation proposed by any Federal department or agency, (2) newly authorized Federal projects for construction and any major Federal agency action (other than a project for construction) to which section 4332(2)(C) of this title applies, and (3) proposed regulations published by any department or agency of the Federal Government. Such written comment shall be made public at the conclusion of any such review.

# EXCERPTS FROM THE NATIONAL ENVIRONMENTAL POLICY ACT, 42 U.S.C. § 4321

## SUBCHAPTER I.—POLICIES AND GOALS

### § 4331. Congressional declaration of national environmental policy

(a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Pub.L. 91–190, Title I, § 101, Jan. 1, 1970, 83 Stat. 852.

## § 4332. Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

(D) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(E) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(F) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(G) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(H) assist the Council on Environmental Quality established by subchapter II of this chapter.

Pub.L. 91–190, Title I, § 102, Jan. 1, 1970, 83 Stat. 853.